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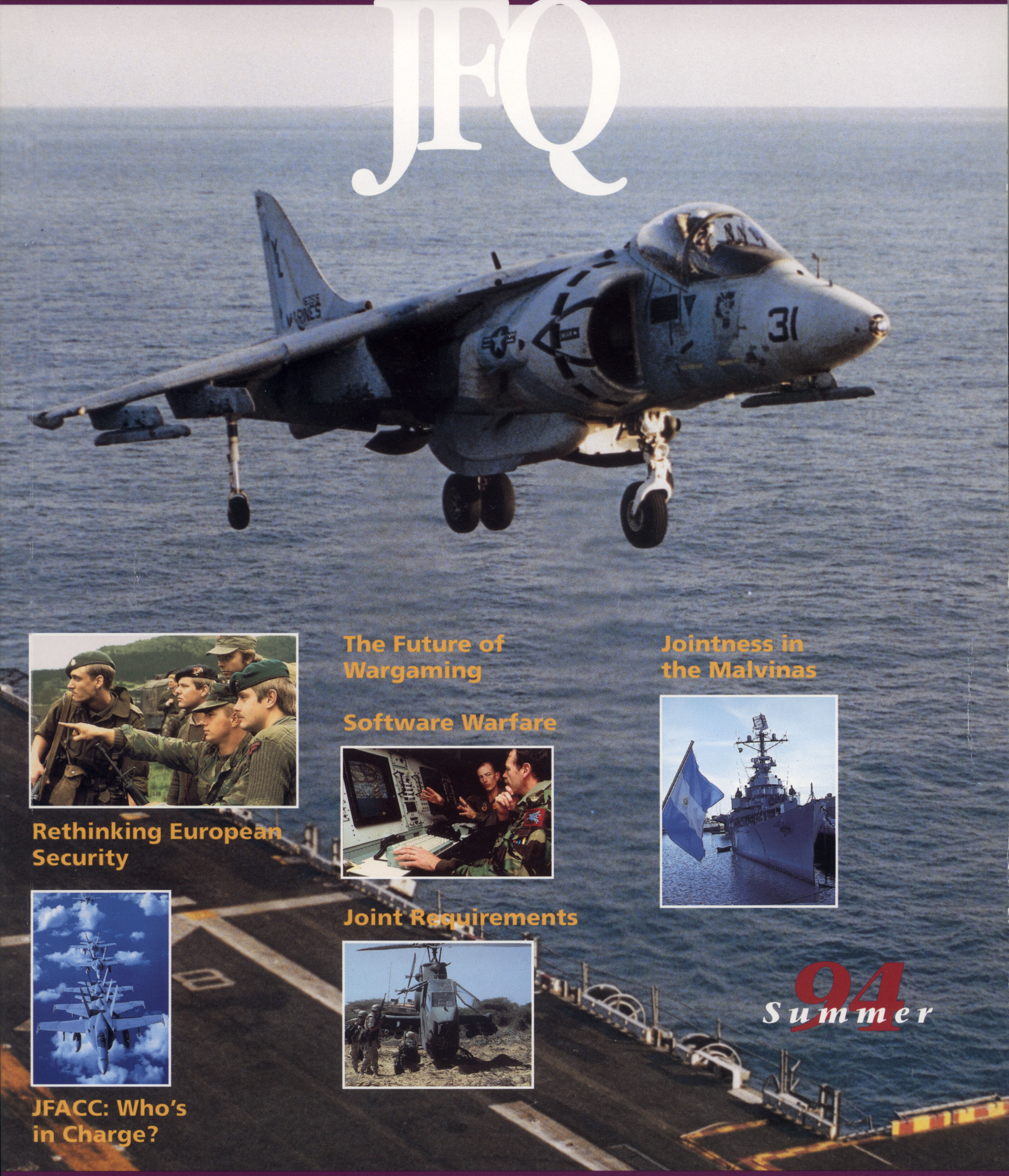

The Future of Wargaming

Software Warfare

Jointness in the Malvinas

Rethinking European Security

Joint Requirements

JFACC: Who's in Charge?

Summer 94

A PROFESSIONAL MILITARY JOURNAL

Report Documentation Page

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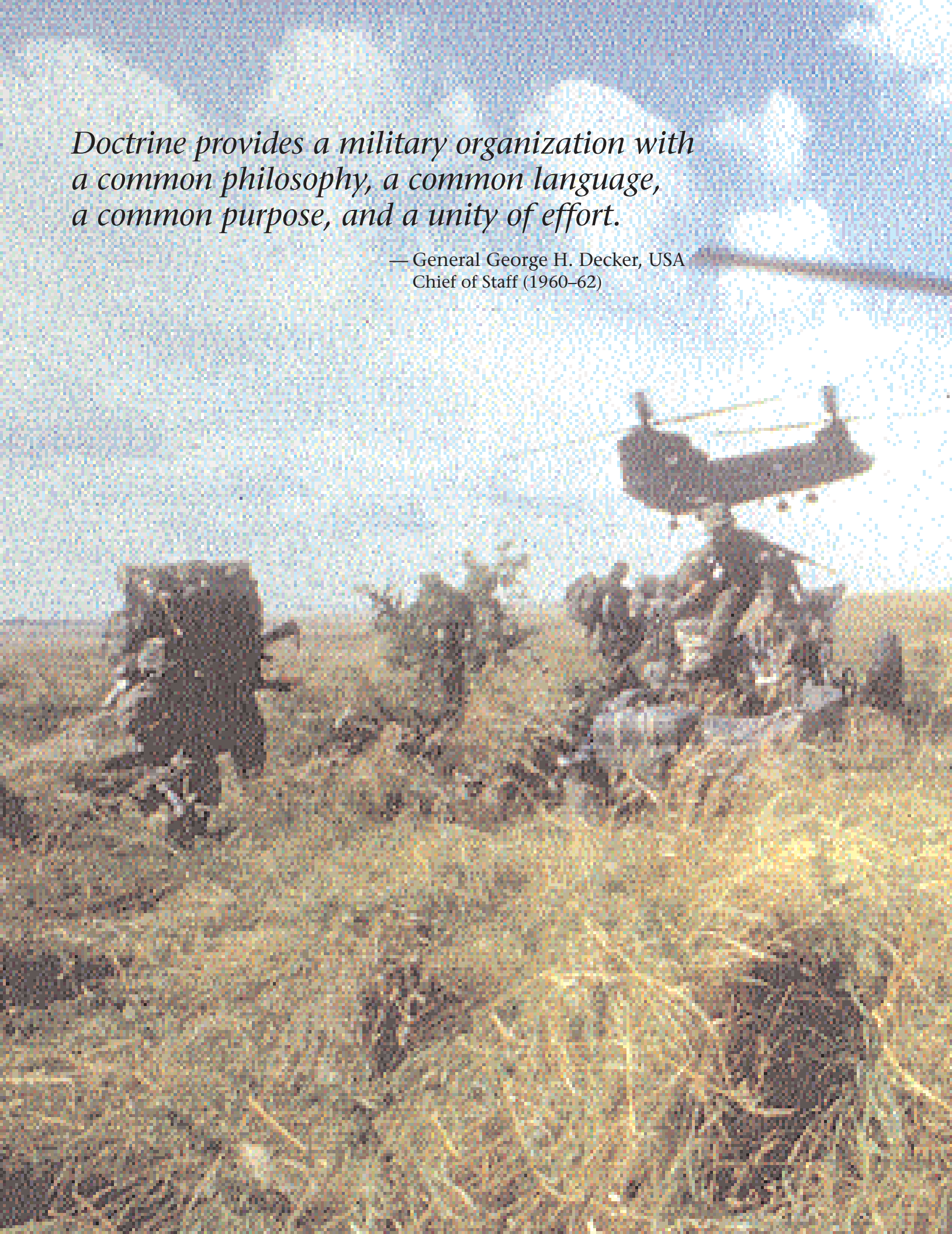

Doctrine provides a military organization with a common philosophy, a common language, a common purpose, and a unity of effort.

— General George H. Decker, USA
Chief of Staff (1960–62)

JFQ

CONTENTS

JFQ

4 **A Word from the Chairman**
by John M. Shalikashvili

JFQ FORUM

6 **Rethinking European Security**
by Hans Binnendijk

8 **Britain, NATO, and Europe**
by Lawrence Freedman

18 **France's European Priority**
by Philippe H. Mallard and Bruno Tertrais

24 **Russia and a Changing Europe**
by Dietrich Genschel

36 **Partnership for Peace: Stabilizing the East**
by Jeffrey Simon

46 **NATO's Bold New Concept—CJTF**
by Charles L. Barry

55 **JROC: Harnessing the Revolution in Military Affairs**
by William A. Owens

59 **Unity of Control: Joint Air Operations in the Gulf—Part Two**
by Michael A. Nelson and Douglas J. Katz

OUT OF JOINT

64 **JFACC: Who's in Charge?**
by J.L. Whitlow

71 **Joint Space Doctrine: Catapulting into the Future**
by George M. Moore, Vic Budura, and Joan Johnson-Freese

77 **Future Directions for Wargaming**
by Peter P. Perla

84 **Software Warfare: The Militarization of Logic**
by Peter C. Emmett

PHOTO CREDITS

The cover captures an AV-8B Harrier taking off from USS Saipan *(U.S. Navy/Charles Stover); inset photos (clockwise, from top left): U.S., British, and German soldiers and marines (DOD); American air weapons controller with British colleague on an EC–130E during Exercise Roaring Lion (U.S. Air Force/Efrain Gonzalez); Argentine cruiser* General Belgrano *at anchor two years before being sunk in the Malvinas War (Robert L. Scheina); AH–1 Cobra participating in downed aircraft recovery exercise in Somalia (Joint Combat Camera Center/Andrew W. McGalliard); and F/A–18s flying in formation during Desert Storm (Joint Combat Camera Center).*

The front inside cover and cross-over page photo depicts infantrymen boarding MH–47s during Exercise Roaring Lion (U.S. Air Force/Chris Putman).

The table of contents background shows a CH–47 Chinook preparing for night mission in Bright Star '94 (U.S. Air Force/Steve M. Martin); inset photos (from top left): Russian soldier during combined search and rescue exercise (U.S. Air Force/Val Gempis); M–1 Abrams moving across European landscape during NATO exercise (DOD); and Marine guard aboard ship (DOD).

The back inside cover catches USS Deyo *with sister ships of the* USS George Washington *battle group returning to Norfolk (U.S. Navy/Troy D. Summers).*

The back cover reproduces a lithograph by Currier and Ives of Admiral Porter running the blockade on the Mississippi at Vicksburg, April 16, 1863 (Museum of the Confederacy).

91 Cutting Defense—Method Instead of Madness
by David F. Todd and Ralph M. Hitchen

95 Argentine Jointness and the Malvinas
by Robert L. Scheina

102 Of Chiefs and Chairmen: Alexander Archer Vandegrift

IN BRIEF

103 Roles, Missions, and Functions: Terms of Debate
by Daniel T. Kuehl and Charles E. Miller

106 Planning for War: A System
by Richard W. Goodale, Jr.

111 Joint Doctrine: New Pubs, Old Controversies
by Michael Leurs

FROM THE FIELD AND FLEET

114 Letters to the Editor

THE JOINT WORLD

115 Doctrine and Documentation

120 A Quarterly Survey of Joint Literature

OFF THE SHELF

121 Marines as an Endangered Species: A Book Review
by C.P. Neimeyer

122 Mediterranean Warfare in 3D: A Book Review
by Brian R. Sullivan

125 Under Four Ensigns: A Book Review
by W. Spencer Johnson

POSTSCRIPT

128 A Note to Readers and Contributors

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A Word from

For over five weeks, countering one attack after another, the Eighth Army under General Walton ("Bulldog") Walker fought the North Korean army along the Pusan Perimeter as the enemy tried to push the last Americans from the peninsula. Two hundred miles away, an invasion force coursed secretly through the seas, en route to Inchon harbor. In the early hours of September 15, 1950, the invasion force, composed of soldiers and marines, seized the tiny island of Wolmi which dominated Inchon. Later in the day, at the next high tide, soldiers and marines assaulted over the seawall and began to sweep through the harbor. By midday on September 16 they had advanced several miles to the east, en route to the next objective: Seoul.

Combat Camera Imagery (Yvette Walden)

The Chairman with civilian and military leaders in Skopje, Macedonia, during a visit to that former Yugoslav republic in support of Operation Provide Promise.

Even as the North Koreans reeled from this blow, General Walker positioned his forces for a breakout. As enemy forces assaulting Pusan found their supplies and communications slowed to a trickle, Navy, Marine, and Air Force aircraft hit targets across South Korea, disrupting North Korea's command and control and cutting its army into disparate pieces. When the time was ripe, General Walker took the initiative, striking out violently to the north and west. The invasion force, under Lieutenant General Edward Almond, soon linked up with the Eighth Army to drive north. These joint sledgehammers were integrated so well, and their strikes were coordinated with such precision and explosive force, that the North Korean defense was crushed. By October 1, just two weeks after the Inchon landings, American forces reached the 38th Parallel in their push toward the Manchurian border.

Though many of us identify joint warfighting with operations such as Desert Storm in the Persian Gulf, Eldorado Canyon in Libya, and Just Cause in Panama, these were only the latest in a long series of events. Since the Revolutionary War the American military has engaged in joint as well as multinational

the Chairman

warfighting. However, those operations were frequently one-off events that demanded a high price in planning and training. Moreover, when the events were over, the separate forces disaggregated and returned to business as usual. Time and again the first battle of a conflict reminded us of the tremendous effort needed to assemble and employ a joint force, and despite the overall success of a campaign or assault, the cost in human life was too great. After mixed success in the 1970s and 1980s, the Goldwater-Nichols DOD Reorganization Act of 1986 established the requirement to develop joint doctrine. Previously, no one individual or agency had responsibility for joint doctrine and no system existed to involve combatant commands in its development. The Goldwater-Nichols Act made the Chairman of the Joint Chiefs of Staff singularly responsible for "developing doctrine for the joint employment of the Armed Forces." The aim of the law was to compel the military to prepare to fight more readily as a joint force, improve interoperability, and prevent tragedies inherent in hasty planning and lack of preparation. Today, the way we conduct joint warfighting—the tactics, techniques, and procedures—is outlined in joint publications.

The Joint Staff was reorganized in response to Goldwater-Nichols with responsibility for joint training, exercises and evaluation, education, interoperability, and doctrine being placed under a single agency, Operational Plans and Interoperability Directorate (J-7). Since the reorganization in 1987 we have made tremendous strides in joint doctrine. We have identified critical areas which joint publications must address and developed formal procedures to involve the combatant commands. But as late as December 1992 we were unable to publish joint doctrine in a timely manner. Then just 13 joint publications were in circulation, and only nine more appeared last year. We were producing on average only two publications per month, and each required 48 months to complete. At that rate, it would have taken four and a half years to get the initial version of each publication to the field and fleet. That simply was not acceptable.

Since then we have stepped up the pace of production. Typical publication time is down to 21 months, and we are producing up to four publications per month. To date we have developed and issued 56 joint publications. The remaining 44 are under development, and we anticipate that two-thirds of them will be published by the end of 1994. Moreover, in order to make the overall publications system more logical, it has been thoroughly revamped and a hierarchy of publications has been created to identify families of warfighting doctrine and to link them together under capstone and keystone publications (see the overview of the Joint Publication System on page 115).

Although our primary focus has been on rapidly developing these publications for CINCs, we are shifting our efforts in order to improve the readability, consistency, and overall quality of all joint publications. Future doctrinal publications will be produced in an easy-to-read, full-color format. Additionally, executive summaries will provide readers with a context to better understand the thrust of each publication. Our first priority is to review and reformat capstone and keystone publications with a deadline of October 1994. The Joint Staff—particularly J-7—is doing its best to provide products of high quality. Joint doctrine has become one of the true success stories of the Goldwater-Nichols Act. But the real job of understanding and applying joint doctrine falls to you. The limited resources of a smaller force means that we must employ the Armed Forces as a warfighting team, and to maximize this potential—for the best synergistic effect—each and every one of us must fully understand how to contribute to that team. We must give it the attention it deserves and we must get it right.

The senior leadership of the Armed Forces is committed to this effort. I am asking you to help. If you do not apply the principles—and the tactics, techniques, and procedures—found in joint publications when you train, then we will not have real doctrine, just a lot of dusty volumes taking up shelf space. Read the publications. Discuss the ideas contained in them and debate the ideas in the pages of professional military journals. More importantly, take the time to understand the concepts and principles spelled out in joint doctrine. Then apply them each day in your organization.

JOHN M. SHALIKASHVILI
Chairman
of the Joint Chiefs of Staff

Rethinking European

Once again America's attention is being drawn toward Europe. Last year President Clinton emphasized the Asia and Pacific region with its dynamic economies, a point punctuated by the Asia Pacific Economic Cooperation (APEC) summit in Seattle. This year began with the NATO summit in Brussels and a Presidential trip to Ukraine and Russia. As the 50th anniversary of the liberation of Europe approaches, it is fitting to take stock of the prospects for the region's security.

The five articles which make up JFQ Forum were contributed by an accomplished group of international analysts. They explore a European scene that has been marked by persistent attempts at political integration; renewed appeals to nationalism which fragmented the former Soviet Union, Yugoslavia, and Czechoslovakia; and a Herculean effort at reform by the former communist states. While the response to these events has been mixed, NATO is showing signs of genuine adaptation as 1994 wears on. It is in this environment that U.S. European Command (EUCOM) must operate and the United States must decide its future contribution to NATO. The American forces in Europe spent the Cold War training and deterring—now they are increasingly operational. Since 1992, for example, EUCOM has planned 36 operations and conducted 16, and this with only one-third of the force presence of just a few years ago.

The Maasticht formula for European integration has been set back, although not derailed, by recession and differing approaches to events in the former Yugoslavia. The process towards monetary union may take longer and be less ambitious than originally planned, but some degree of union will probably occur. Elements of the European Security and Defense Identity (ESDI) are already in place as political cooperation deepens. The new aspect of the equation is that the United States no longer sees ESDI as a threat to NATO. It was not long ago that Washington expressed its reservations about the limits of French-inspired military integration. Now America acknowledges that NATO's future requires a united Europe to share the defense burden. The United States and France, long antagonists within NATO, finally recognize that only together can they meet the security risks of this era of transition. In "France's European Priority"

Security

Philippe Mallard and Bruno Tertrais shed light on current thinking in French security policy.

Europeans recognized that America was serious about ESDI when it proposed establishing the NATO combined joint task force (CJTF) concept at the Brussels summit. As Charles Barry observes in "NATO's Bold New Concept—CJTF," this concept provides for forces to be used in out-of-area operations by NATO alone, by NATO and ad hoc coalition partners, or by the Western European Union (WEU) if the allies agree. In effect, the United States proposed to provide WEU with what it lacks, an operational capability. It is surprising that WEU has not moved decisively to seize the offer. Differences remain over details in the CJTF concept, and France's complicated system of political cohabitation may delay its implementation until 1995.

As Western Europe limps towards integration, states to the east have been primarily divided along ethnic lines. Czechoslovakia split peacefully because ethnic and political maps happened to be coterminous. Yugoslavia was not that lucky. And the world awaits the outcome of the former Soviet Union's fragmentation as Russia and Ukraine spar over Crimea. The Russian Federation itself faces challenges from those who seek independence and autonomy.

NATO is engaged in Bosnia where it used force offensively for the first time in its history. It operates aircraft in the skies over Bosnia to deny flight and protect its ground forces, enforces the embargo in the Adriatic, and supplies humanitarian aid through both airlifts and airdrops. If a peace formula is agreed upon, NATO will help ensure compliance with the terms. The future of NATO is increasingly bound up in Bosnia and with the United Nations. If NATO does not act, many will claim that it does not have a role to play in tackling current security issues. If it becomes mired in a long conflict and is forced to withdraw as the United States did in the case of Somalia, the Alliance will be damaged. So NATO must act but cautiously in order to achieve success.

Most of Central and Eastern Europe is not at war, but it is strategically adrift. Nations that spent decades preparing to fight NATO now are eager to join it. In January Alliance leaders said they "expect and would welcome NATO expansion that would reach to democratic states to our east, as part of an evolutionary process, to bring into account political and security developments in the whole of Europe." NATO has endorsed the American sponsored proposal for a Partnership for Peace (PFP) program which is designed to avoid drawing new boundaries on the map of Europe while providing operational contact among the militaries of the East and West. Although several PFP exercises are planned this year, Jeffrey Simon argues in "Partnership for Peace: Stabilizing the East" that more resources are required to make PFP work. But even with the resources, NATO members will soon be faced with tough questions on expansion.

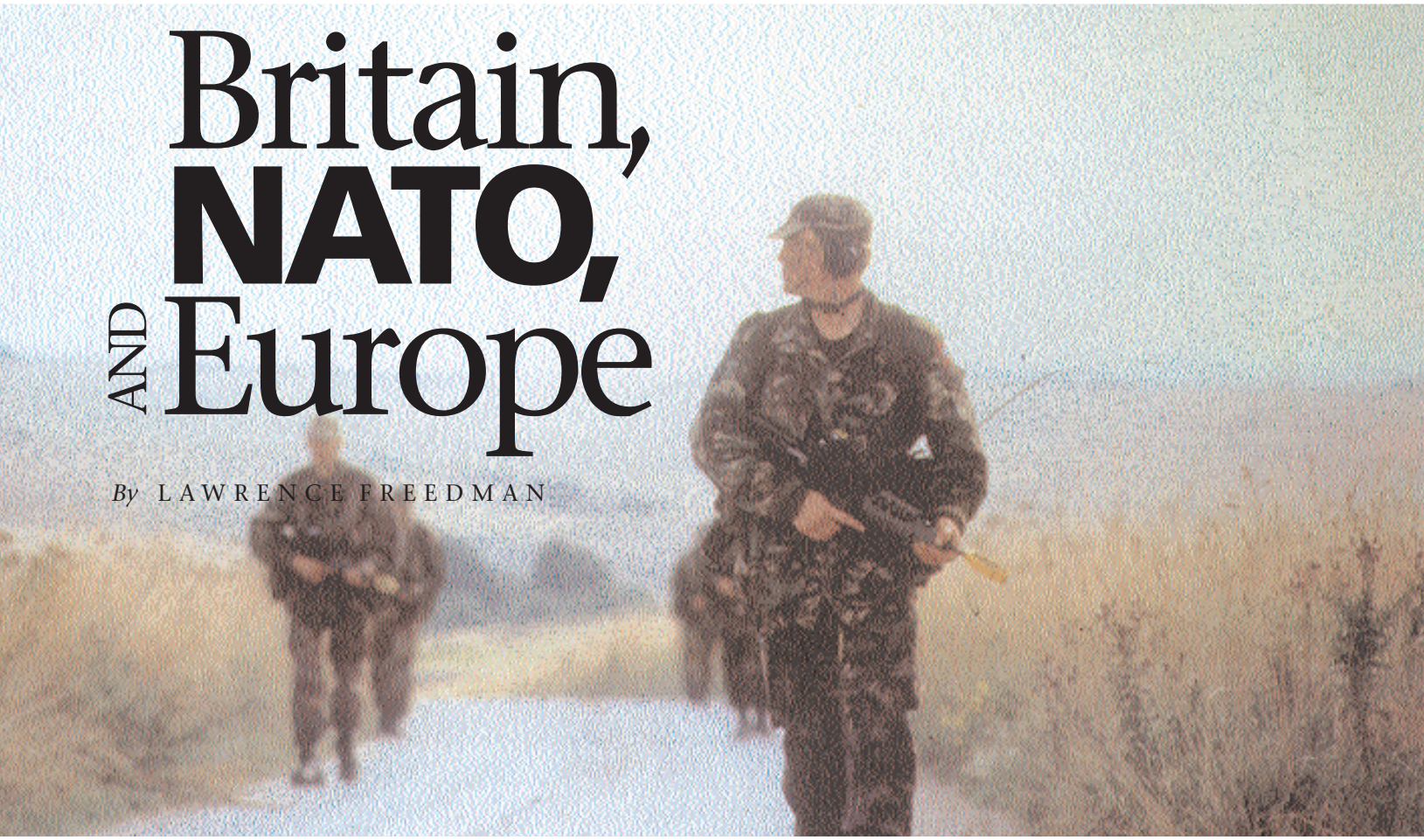
Perhaps the greatest unknown on the European scene is Russia's future direction. Even if Russia remains intact and avoids the debacle of Zhirinovsky, its foreign policy will increasingly reflect narrowly defined national interests. As Dietrich Genschel notes in "Russia and a Changing Europe," the signals are ambiguous, but the recent U.S.-Russian foreign policy honeymoon may be over. That does not necessarily mean a return to the Cold War, but it requires developing a clear mutual understanding of one another's interests and reinforcing the NATO-Russian strategic relationship whenever possible.

America's future in NATO should be clearly articulated. In "Britain, NATO, and Europe," Lawrence Freedman observes that during the Cold War, the United States, together with Britain, played a balancing role in Europe in a way that was not dissimilar to England's in the last century. Europe still needs a balancing act as well as an insurance policy. America is the only power that can serve both of those roles.

HANS BINNENDIJK
Editor-in-Chief

Britain, NATO, AND Europe

By LAWRENCE FREEDMAN



U.S. Air Force (Efrain Gonzalez)

The British army's 5th Airborne Brigade during Exercise Roaring Lion.

Britain's approach to European security is normally taken to reflect its particular geography and history. As an island separated by a channel from mainland Europe, Britain was until recently only occasionally a close participant in continental affairs. As a maritime nation it developed a global empire. Its cultural affinities were with the English-speaking world, especially North America and Australasia. Yet Britain's history has always been intertwined with the rest of Europe's. Britain is by no means the only peripheral part of Europe, nor is it the only country with a colonial past and continuing interests in other regions of the world. However, the natural barrier of the Channel meant that until the air age it enjoyed a degree of security unknown in the rest of the continent and managed to avoid occupation.

If British policy has appeared nonplussed by developments across the whole of Europe it is perhaps because of the degree of cohesion shown in Western Europe, which began during the Cold War to integrate to quite unprecedented levels while Eastern Europe was cut off by the Iron Curtain. This stability was based on durable alliances and represented a striking and welcome contrast to the past. Europe previously appeared as a collection of disparate and proudly sovereign states, with particular intra- and extra-regional interests, often rivals and occasionally bitter enemies, and this was the quality upon which Britain's traditional security concept had been based. Homogeneity, however welcome in principle, has never seemed quite natural. Perhaps then British policymakers feel more at home in a heterogenous Europe that is in a state of flux, so long as they sustain a degree of detachment.

The Balance of Power

The idea of a "balance of power" was informed by the basic objective of preventing one power or group of powers from obtaining

effective hegemony over the continent—whether it was Hapsburg Spain, Napoleonic France, Imperial Germany, Nazi Germany, or the Soviet Union. The balance of power was never seen as an alternative to war. Armed conflicts were often necessary to preserve a balance. It was about ensuring that the "greatness" of other "great powers" was always kept in check. In its crudest versions all that mattered was the distribution of power itself. However, such a model was based on the most mechanistic views of international politics in which the domestic politics of states were irrelevant. British governments and those on the continent were aware that challenges to the international status quo often had an ideological motivation which carried implications for the internal balance of power in their own states. Thus the wars of the past two hundred years have been about the great issues—from egalitarianism and self-determination to Bolshevism and Nazism—as much as about the balance of power itself.

Britain contributed to all NATO regions with all types of capabilities

In an idealized version popularized in the 18th century, the method of sustaining the balance was tactical alliance, backed where necessary by an expeditionary force. There was always some reluctance on the part of Britain to get very involved in European land wars. Britain's forte was maritime rather than land warfare, and it thus always preferred to make a point through blockade rather than battle. It even tended to build its empire with ingenuity and improvisation rather than brute force, if for no other reason than that there was never enough brute force to meet the wide range of overseas interests acquired over the course of the 18th and 19th centuries.

The balance of power system collapsed in 1914 and only through extraordinary measures was some sort of equilibrium restored by 1950. The semidetached power plays of earlier years became overwhelmed by the brutal logic of total war. Britain twice deployed expeditionary forces to Europe. The one sent in 1914 stayed for four years and for the first time experienced casualties on a continental scale. The force dispatched in 1939 was evacuated when France fell and returned only after being reinforced by America and other allies. This experience convinced policymakers in London that European security required constant attention. They also became convinced that the new threat of Soviet hegemony could not be met through an alliance of the European democracies, especially as some seemed vulnerable to a communist takeover. The new challenge of the Soviet Union could not be met by the old method which in fact had not succeeded against Germany and certainly would not suffice. It was necessary to bring the United States into European affairs on a permanent basis, something that British diplomacy in the late l940s was designed to achieve.

NATO Orthodoxy

Although the new formula required the United States to take on the balancing role, past experience suggested that American enthusiasm for this role would be at best inconstant. It would therefore need to be tied in through formal treaty commitments and a peacetime garrison. London could not ask of Washington more than it was prepared to offer itself, so Britain in its own defense policies undertook—on a much smaller scale—all those tasks which it deemed essential for the United States. In its own break with the past it accepted an overt and open-ended peacetime alliance and a continental commitment for the British army. It even shadowed the American nuclear guarantee to Europe with one of its own, basing key elements of its nuclear capability in West Germany and—notionally at least—assigning its strategic forces to a supreme allied command.

This turned Britain into a paragon of NATO orthodoxy. Its proudest boast was that it contributed to all NATO regions with all types of capabilities. One rarely detected any divergence of view from British government pronouncements and the prevailing view expressed at NATO headquarters. This was hardly surprising as the conceptual framework within which NATO operated was largely an Anglo-American creation. Britain supported flexible response, helping to uphold nuclear deterrence while contributing to forward defense. Its forces were stationed

Lawrence Freedman is professor of war studies at King's College in the University of London and a member of the council of the International Institute for Strategic Studies.

in Germany not only to help keep the Russians at bay but also to reassure Bonn—and initially to reassure Germany's neighbors that any retrograde tendencies could be monitored and if necessary suppressed. By contributing a strong naval presence in the eastern Atlantic it helped sustain the idea that sufficient American reinforcements and materiel might be ferried across the ocean to turn the course of a prolonged European war.

This had its costs. Per capita defense spending was significantly higher for Britain than its European allies and the burden on gross domestic product greater. As a result, with each post-war decade, there came a crunch point with a major defense review. Gradually the reviews concentrated effort on NATO requirements at the expense of "East of Suez" commitments. Thus the priority attached to the Alliance came at the expense of those aspects of the British defense effort that might have been expected to have the most nationalistic appeal. In the 1960s and 1970s global presence was sacrificed for a regional commitment. In 1981, despite the attachment of an "island people" to its navy, the continental commitment won out, in the form of the British Army of the Rhine (BAOR), despite its high absolute and foreign exchange cost.

The national nuclear strike force also became important, though it did not prove to be a self-evident source of comparative national advantage. From wartime cooperation in the Manhattan Program throughout the post-war, British nuclear policy was always essentially about managing Anglo-American relations. Despite some consideration of "stand alone" scenarios the concern has always been with interdependence rather than independence, and in contrast to France with the need to help the rest of Europe draw on American deterrent capabilities.

Over time, the relevance of a British nuclear capacity to Alliance deterrence became more questionable. In part this was because whatever the political weight generated by nuclear status, it was diminished by the increased reliance on the United States to sustain this status. Moreover, because of the rather enigmatic nuclear doctrine adopted by British policymakers, which never admitted of the possibility that the United States would renege on its nuclear guarantee to Europe, it was difficult to generate popular support for the force that a more Gaullist posture might have allowed. This became problematic when the cost of staying in the nuclear business suddenly appeared substantial with the decision to opt for Trident as a replacement for Polaris.

Cooperation with the United States allowed Britain to pay a lower subscription to the nuclear club than any other declared power and, remarkably for a major defense program, the price in real terms went down rather than up in the period from conception in July 1980 to operational service at the end of 1994. This fact, plus the shift in the calculations from the savings to be made in the investment which might be wasted as time went on, had reproduced a national consensus in favor of maintaining the force by the time of the 1992 election.

With or in Europe

The balance of power model provided no basis for an institutionalized alliance—although to some extent that was what NATO became—and had little relevance for a broader economic, social, and political integration. Nonetheless, this too was what Britain found itself accepting. British policymakers kept apart from the initial formation of the "common market" in the 1950s. The country was judged to be "with Europe, but not of Europe." After the accession to the Treaty of Rome in 1972, Britain's behavior appeared to its partners as reflective of a congenital insularity and a failure of political will and imagination. Part of the difficulty was that once Britain attached itself, the European project became too well defined and embodied a series of political, economic, and social understandings which Britain did not share. The problem, therefore, was not so much culture shock as it was joining a game in progress in which the other participants had devised the rules and were experienced players. With NATO, by contrast, Britain was "present at the creation" and so had a hand in developing the relevant institutions with which it was wholly comfortable, including a command structure in which British officers occupied a disproportionate number of top positions (especially after the French absented themselves in the 1960s).

All this ensured an instinctive British wariness for the ideas of those in Europe who, inspired by a vision of an integrated, coherent, political entity operating as a separate actor on the world stage, identified as a critical weakness a lack of a European defense competence independent of the United States. British governments had no interest in encouraging Europe to acquire this sort of competence simply as a means of changing its political, and ultimately constitutional, character and resolutely opposed any suggestion that there could or should be an alternative security community to that provided by the Atlantic Alliance.

Britain has always been attracted by the notion of Europe regaining some former greatness

The idea that a choice had to be made between European and American connections was unacceptable (with the possible exception of Edward Heath's premiership from 1970 to 1974). As they never lost their commitment to the Atlantic Alliance, successive British governments saw themselves as helping to explain the United States to Europe (and vice versa). Britain was thus only prepared to support initiatives on European defense as a means of fortifying NATO rather than creating an alternative.

It should be noted that this did not indicate a lack of interest in a developing European voice in foreign policy generally. One of the most compelling arguments for British membership of what was then known as the Common Market, and which matured into the European Community before most recently adopting the post-Maastricht appellation of European Union (EU), was that this was a means by which Britain could help to regain its declining position in international affairs. With limited resources it seemed to make sense to band together with close neighbors to deal on equal terms with others. Britain has always been attracted by the notion of Europe as a group of former great powers, diplomatically skilled but politically weakened, regaining some former greatness by coordinating foreign policy. In practice, a common foreign policy came easiest when the common interest lay in a defensive, low-profile position rather than in an adventurous, innovative, but risky diplomacy. But disagreements with the United States in certain critical areas, such as the Arab-Israel dispute, encouraged political cooperation which gradually became more institutionalized.

Thus in contrast to the rather grudging approach to the internal development of the community, Britain's attitude to its external expression was altogether more enthusiastic. Yet as a common foreign policy strayed increasingly into areas of security policy doubts began to creep in. There was an awkward interface between the generally supportive attitude when it came to European foreign policy and the suspicion surrounding any attempt to create a European superstate. After all, control over the instruments of organized violence is the hallmark of a state. In the inter-governmental conference which led to the Maastricht Treaty at the end of 1991, Britain sought to draw a clear distinction between *security* policy and *defense* policy, with the former being a proper consideration of the European Council of Ministers and the latter deemed beyond their competence. It also worked hard and successfully to keep a common foreign and security policy out of the hands of the European Commission and a matter for intergovernmental organization.

The debate in 1991 also involved French determination to insert a strong push towards a European defense identity. The challenge was symbolized through two alternative force structures, both designed to respond to post-Cold War conditions. On the one hand, the British worked to develop the concept of a NATO rapid reaction corps which, it so happened, would come under a British command, on the other, the French proposed with the Germans, and later others, a Euro-Corps which initially appeared to be designed to operate outside the NATO framework. It was suggested that the Germans went along with this since they were cross with Britain for the way it secured the command of the new NATO corps. However, at the time Bonn was very sensitive to French anxieties over German power following unification and thus the consequent need to anchor Germany within a tight European Union. This was the rationale for the whole Maastricht exercise.

At Maastricht the British, working closely with the Italians, resisted all proposals which implied an alternative security system to NATO but instead negotiated a compromise notion based on the Western European Union (WEU) as a sort of mediating institution. Because the Germans, though anxious to placate the French, did not want to harm NATO this compromise was adopted. WEU had served as the framework for German rearmament and reintegration into Western security structures in the 1950s, and then enjoyed a brief revival in the 1980s as the vehicle for a European strategic perspective distinct from that of the Reagan administration. It had never had a command structure and even the development of a planning cell in Brussels (Britain had encouraged WEU to move its headquarters there from London to be closer to NATO) meant that it was not really a credible alternative to NATO. Its value has always been in the symbolic rather than substantive sphere, as a means of nodding in the direction of a more coherent and focused European effort without subtracting from NATO. In the future it could have another symbolic, halfway house role, as a means of drawing non-NATO European countries into Western security arrangements.

By 1994 the debate over whether there could be a full-blooded move to a European defense entity had been overtaken by events. The Gulf War had demonstrated the sheer military power at America's disposal

Combat Camera Imagery (H.H. Deffner)

Crew aboard NATO Airborne Early Warning E–3D aircraft.

and had also increased confidence in its ability to wield this power effectively. Meanwhile Europe's efforts to develop a distinctive input into Persian Gulf policymaking were paltry. When it did take a lead in managing a major crisis in the case of Yugoslavia, the limits on coherent and effective action became painfully apparent. The newly liberated democracies of Central and Eastern Europe might have been interested in membership in the European Union, but they were aware of the lengthy timetables envisaged before this would be possible and sensitive to the resurgence of Russian nationalism. They therefore concentrated their efforts on requests to join NATO. This served to enhance the Alliance's reputation if not its actual membership.

British artillery moving into position during NATO exercise.

DOD

Britain and France were natural military partners

The French Connection

The combination of the Persian Gulf and Balkan experiences convinced France, despite its own national efforts, that Europe lacked the basic wherewithal—especially in terms of logistics and intelligence but also firepower—to match American capabilities. Many key tasks could simply not be performed without the United States. Meanwhile its German partner lacked a constitutional and political basis for intervention in crises such as Bosnia. Without understating the significance of the ties between the two countries, it is important to note that they were based as much on French fears of a German eastward drift and German fears of French unilateralism, as well as the painful memories of past antagonisms, as on any positive commonality of outlook. The symbolism here as elsewhere has played an important role in the development of modern Europe, but it has not been enough to ensure an effective input into the management of some messier crises in the 1990s.

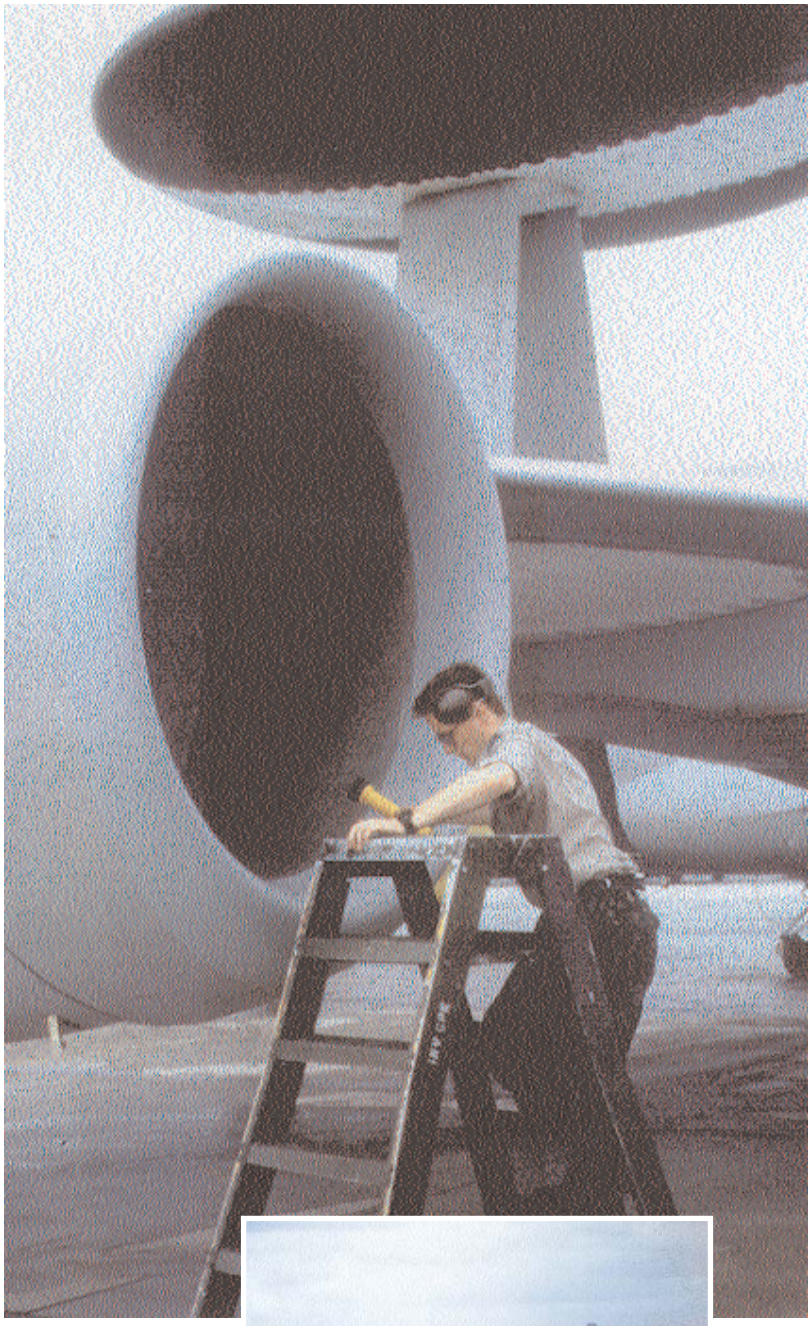
Events in the 1990s have confirmed a tendency which had been evident for some time, though ironic in view of the fact that the two countries involved appeared as the chief protagonists in the debate over European defense. Britain and France were natural military partners. Given their respective histories this judgment might not seem so surprising: former great powers, former imperial powers, current nuclear powers, and permanent members of the U.N. Security Council. Despite arguments over European institutions, the two had been moving towards closer cooperation for some time. There were a number of reasons for this. During the 1980s both countries had a common interest in the preservation of their national nuclear forces and thus a shared suspicion of the American "wobbles" over nuclear deterrence—attitudes displayed by President Reagan through his Strategic Defense Initiative and Reykjavik summit with Gorbachev.

A shift towards France was also evident on the British left. The left tended to the view that many of the continent's ills could be traced to America, and that U.S. foreign policy was generally unacceptable, whether engaged in an arms race with the Soviet Union or opposing communism in Central America. During the Wilson and Callaghan governments of the 1970s the Labor Party was generally assumed to be more pro-American than the Conservative Party and notorious for its strong anti-European Community (EC) faction. With the growth of concern over U.S. security policies, many on the left in Labor saw a danger in appearing to be opposed to connections with both the United States and Europe, and instead opted for Europe.

A third factor was the need for collaboration in procurement. Britain tended to view such cooperation as a useful means of getting better value for money at a time of increasing budgetary pressure, ahead of demonstrating greater "Europeanness." This issue came up in 1986, when two cabinet ministers resigned over the future of Westland PLC, a small helicopter manufacturer. The then Secretary of State for Defence, Michael Heseltine, was seeking to collaborate with European companies rather than with the American firm, Sikorsky. The Ministry of Defence was prepared to accept a degree of subsidy in order to preserve a defense firm and to give it a more European dimension, while the Department of Trade and Industry was prepared to support European collaboration, all things being equal, but not as an overriding objective.

It is dangerous to invest grand political ambitions in the tedious processes of weapons collaboration and military reorganization. There is always the risk that they may turn sour, which can reflect on the political ambitions. This was the consequence of some projects in the 1960s, such as the Anglo-French Variable-Geometry Aircraft and even Concorde. There is greater cooperation now, although less because these various processes are infused with unnatural and unsustainable political enthusiasm than because external pressures and rationalization of defense industries are creating a formidable logic of cooperation.

Experience in the Persian Gulf and Yugoslavia led France to acknowledge that, if it could be made to work, NATO was the most natural forum in which to forge robust policies. In the Gulf, Britain and France both made substantial contributions to the coalition effort, but the French then went out of their way to maintain their separateness. In the former Yugoslavia, the two countries found themselves cooperating closely as the



Combat Camera Imagery (Andy Dunaway)

Inspecting RAF E–3D Sentry during Deny Flight.

U.S. Air Force (Efrain Gonzalez)

British Hercules departing Kevill Air Field.

leading contributors to the U.N. force, regularly commanding each other's troops. Moreover, American policy over Bosnia, especially from 1993 on, alarmed and exasperated Britain, since it felt that President Clinton was prepared to see British and French soldiers sacrificed for his own high moral stance. British policymakers began to wonder after 18 months of the Clinton administration whether it was sensible to continue relying on the level of U.S. commitment to European security which they had come to expect.

The Special Relationship

So while British security policy has always been firmly Atlanticist, this has not prevented it from acquiring a greater European gloss over the years, just so long as the objective was to hold NATO together rather than pull it apart or dwell unduly on a day when the United States might withdraw. This reflects a consistent strategic philosophy for Europe, but it also reflects a concept that a "special relationship" with Washington serves as an "influence multiplier" for London. It has been assumed that an occasional British word in the American ear might spare the Western Alliance all sorts of nonsense.

The special relationship had three features: first and most enduring, a common language; second, a wartime alliance carried over into the post-war era with intense cooperation on all defense matters, including intelligence and nuclear forces; and third, for over two decades after the war Britain retained substantial interests outside of Europe and was the ally with frequently the most to contribute on the range of foreign policy issues faced by Washington. The quality of this special relationship is a subject of continual fascination for the British press, as it is assumed to depend on personalities. Thus when George Bush first visited Europe as President in 1989 the main preoccupation in Britain appeared to be whether Margaret Thatcher could achieve the same rapport she had with Ronald Reagan in the case of his successor.

More significantly, there was an awareness of a shift in American attentions towards Germany, which was now the most powerful European country. There was, of course, nothing new in Germany playing a critical role in NATO deliberations, for it was the key front-line state. Its influence has

grown with its armed forces. But this caused few problems for Britain because there were no great differences between Bonn and London. From the mid-1980s on, however, there was a steady divergence of views between the two allies. Mrs. Thatcher has never wavered in her opinion that any new accommodation with the East could and should be largely on the West's terms, based on continuity in NATO policy and strategy. For their part the West Germans argued that a need existed to modify NATO's posture—especially regarding nuclear issues—so as to appear more conciliatory to the East. Though the position of the Bush administration, like that of the Reagan, was more intellectually disposed towards the British view, it also prided itself on a pragmatism and ability to knit together ingenious compromises.

the Gulf crisis illustrated the contribution Britain could make when the security stakes were high

This came to a head in 1989 with an argument over short-range nuclear weapons. The issue died with the collapse of the Berlin Wall. It was then superseded by a sense that Europe was moving beyond the old questions of the Cold War. In terms of the Anglo-German-American triangle this had important implications. First, it put German unification on the agenda and, at least in 1990 before the full economic implications of unification were appreciated, created the prospect of the sudden emergence of German economic domination of the continent. To German irritation, Prime Minister Thatcher was more vocal in her worries than other European leaders, though it should be stressed that her concern was economic rather than military (and quite widely shared). Her memoirs reveal her exasperation with President Bush's reluctance to recognize that there was a need to respond to a shift in the balance of power. President Mitterrand did understand this, but after toying with Mrs. Thatcher's ideas for a new Anglo-French entente he decided to persevere with the established policy of close cooperation with Germany. Paris wanted to ensure that Bonn remained tied down to European institutions, which in turn meant encouraging the process of deepening these institutions, thereby adding to Mrs. Thatcher's fears of a corporatist European super-state, driven in Brussels and powered by France and Germany.

This created a crisis over British influence in Europe which has yet to be resolved. It was not helped by the recurrence of the country's familiar economic troubles. Other countries could put up with a lot from a conservative government when it enjoyed the backing of a strong currency, a healthy trade surplus, a booming economy, and low inflation. Its authority diminished with its country's economic performance in the early 1990s. For the United States, a Britain out of step with its European partners was of slight value as a vehicle for the articulation of its own perspectives. Better to work with Germany, which was at the heart of everything. Now that there is a more realistic appreciation of the new vulnerabilities that Germany accepted through unification as well as the new strengths, British policy too has moved in this direction.

For America, the 1990 Gulf crisis illustrated the contribution Britain could make when the security stakes were high—and also the limits to German power—and helped restore Britain's status with the Bush administration. The debates in 1991 over Maastricht alarmed many officials in Washington, and the British role in stressing the importance of NATO was appreciated. Americans still found it easier to talk to the British than anyone else. Close cooperation on nuclear and intelligence matters was entrenched.

Things then seemed to move into reverse again with the Clinton administration, dogged by the perceived weakness of Prime Minister John Major and allegations that Britain's Conservative Party helped the Republicans in the 1992 campaign. However, it has become apparent that this analysis is too superficial. Of far more importance is an awareness that economic issues and Asia are priorities in U.S. foreign policy, and that foreign policy itself ranks below domestic issues on Clinton's agenda. American leadership in NATO has been fitful and not always well focused. When the power is turned on it can still shape events and set agendas, as with the Partnership for Peace scheme. As often as not the power appears turned off or on a weak charge. Thus British policy has become confused by the possibility of a gradual American disengagement from its European

commitments. The basis of the special relationship becomes of far less importance than before if the United States is not so vital in keeping the European balance of power.

Britain played a critical role in putting the Western Alliance together and then sustaining it. This was based on the fear of a hegemonic power in Europe. With the Soviet Union gone and Russia withdrawn and the victim of inner collapse, this risk has subsided as a dominant factor in British policy. The old Soviet threat has been replaced by alarm over the consequences of chaos within the old communist bloc. There is an "arc of crisis" stretching from the Baltic to the Balkans that encompasses much of the Mediterranean where current anxieties are focused on Islamic fundamentalism in North Africa.

U.S. Marine Corps (Paul Backs)

RAF BK–Mark 2 Victor tanker in Saudi Arabia.

Those within this arc are at risk. Britain, however, is as far from most points along the arc as any of its neighbors. This does not mean that Britain should be disengaged from developments in that region—only that there is no cause for extraordinary measures that go beyond those of an ally if a response to this crisis is deemed necessary. The move away from a world where security concerns for the highest level of British policy arose at every turn has almost been concluded.

This has not led to the development of a strong isolationist faction in Britain, but pressures at work on American foreign policy are also evident on the other side of the Atlantic. Why should Britain accept disproportionate defense burdens and military risks on behalf of its partners who are both more prosperous and have more direct interests at stake? The fact that it still accepts those burdens and risks reveals that British forces not only tend to be professional and reliable, but also that there are important shifts in relations with the rest of the continent. Previously, the country's vital interests were bound up with preventing hegemony by another power. The favored security instrument was alliance. This meant that events within Europe, which in themselves might be quite localized in their origins, could soon spread if they impacted on the wider alliance system. Now Britain's vital interests are bound up with the economic health of its partners in the European Union, and upheavals on the continent have to be judged in terms of their economic impact.

This leads to a concern for stability and reform in post-communist Europe which makes it extremely difficult to ignore all those factors which might upset political and economic progress in this part of the world, including a nasty turn of events in Russian politics. The management of an interdependent Europe puts the greatest demands on political and economic instruments of foreign policy, but the military instrument cannot be excluded. If conflicts get out of hand the equilibrium of the whole continent might be threatened.

This requires a quite different approach than the traditional balance of power concept. Britain has been no more successful than others in working out what this approach requires. The choice between NATO and the European Union has thus been hampered by the fact that neither organization has coped well with the post-Cold War world, and that the new contenders, especially the Conference on Security and Cooperation in Europe (CSCE), have fared even worse. If military issues continue to loom large, then NATO is acknowledged to be the more efficient for directing Western power. This coincides with Britain's view but it depends on the readiness of the United States to commit itself to European military exertions which may appear quite marginal to its immediate security interests. On the other hand, the inhibitions at the heart of German policy limit the changes for development of a possibly exclusive European defense entity. Britain once took advantage of its semidetached position in Europe to orchestrate a balance of power. It may now use this same position to wait in relative security until its principal allies from Cold War days have sorted out the relevance of their power to the new challenges of European security. JFQ

France's European Priority

U.S. Navy

Clemenceau-class aircraft carrier *Foch* during Exercise Distant Drum.

By PHILIPPE H. MALLARD *and* BRUNO TERTRAIS

France's widely-celebrated national consensus on defense has not been eroded by changes in the strategic landscape over the past five years. In fact, public support for the French military has increased since the end of the Cold War. Publication of *Livre Blanc sur la Défense* (or French white paper on defense) earlier this year illustrates this consensus as well as continuity in policy. But it also represents a crucial stage in adapting defense policy to the new international security environment. The clear priority given to the European dimension of defense is one of the most significant elements of this new policy. Reorganizing the defense establishment has been a key feature of French security policy since 1991, particularly from a European and transatlantic perspective. It also forecasts the French military posture of the year 2000.

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Reorganizing Defense

Defense reform, initiated in the wake of the Persian Gulf War, was the first of three steps in the review of French defense. The overall goal of this reform could be described as increasing the ability to anticipate, prepare for, and conduct joint operations

within a national or multinational framework. To fulfil this goal, operational and nonoperational national chains of command have been separated. Between 1991 and 1993 six organizational structures were put in place: *Direction du renseignement militaire* (DRM), a single joint military intelligence directorate that reports to the chief of defense staff and replaces various existing services; *Etat-major interarmées* (EMIA), a joint planning staff for operations in and out of Europe; *Centre opérationnel interarmées* (COIA), a joint operations center to conduct such operations; a special operations command; *Délégation aux affairs stratégiques* (DAS), a policy division with a focus on international affairs; and *College interarmées* (CID), a joint defense college.

defense reform could be described as increasing the ability to conduct joint operations

The second and perhaps most important step of the review was *Livre Blanc sur la Défense*, a 160-page document which was commissioned by Prime Minister Edouard Balladur in April 1993 and made public in March 1994. The white paper was drafted through an interagency process in which all relevant departments and organizations were involved. Experts were invited to contribute to what was the most important review of French defense policy since the 1960s. In a context of change, there was a need for a reference text on defense doctrine (the previous white paper having appeared in 1972). There was also a need for a long-term analysis of security needs and priorities (including in the defense industry). There are elements of both change and continuity in the document because it was agreed that most of the basic features of French security policy remained valid.

The white paper is also ambitious and reveals some significant shifts in position. First, a clear priority is given to European and multinational dimensions of security. In the future, France will probably act in a multinational context most of the time; only if it becomes necessary will action be taken in a strictly national context. Second, a balance has been struck between deterrence and action, recognizing that conventional forces are likely to play a new and specific part in the current strategic environment, especially for crisis management and peacekeeping.

Last, the white paper distinguishes among the means of defense: the first are contributions to what is called the permanent security posture which protect the nation from aggression against its vital interests at all times; the second are deployable forces to deal with regional crises or peace operations; and the third are requisite missions of a permanent support structure which carry out training, education, equipment, personnel support, etc.

The third step in reorganizing defense is the latest planning bill which is being discussed by parliament. Such bills are provisional frameworks for defense budgets and equipment programs for a three- to six-year period. The long awaited bill is very ambitious because it covers the years 1995 to 2000. (The current draft assumes an annual economic growth of about 1.5 percent by end of the century.) The annual equipment budget (traditionally around FF 100 billion) would grow by at least 0.5 percent per year in real terms. The budget is divided into six modules, the most important being air/land operations (module 4) and nuclear deterrence (module 1); it should also be noted that space/intelligence/communications (module 2) has constantly grown since 1991.

Honor guard in Saudi Arabia.

U.S. Air Force (H.H. Deffner)

Security Policy: Key Features

Preserving nuclear deterrence is the ultimate guarantee of national survival. Accordingly, the debate is about *how* to maintain a nuclear deterrent and the extent to which it

should be adapted, not *whether* it should be maintained. Nuclear doctrine firmly remains one of deterrence, based on the capacity to inflict unbearable damage. Nuclear weapons deter *any* adversary from threatening vital interests by *any* means, and with no precise definition of those vital interests deterrence rests on uncertainty. Whilst the doctrine remains the same, the instruments of deterrence may have to be adapted in the future to ensure that political authorities have the means to effectively persuade any conceivable adversary, under any conceivable set of circumstances, that aggression against France and its vital interests would entail an unacceptable risk.

nuclear doctrine firmly remains one of deterrence, based on the capacity to inflict unbearable damage

Fast attack craft *FS La Rieuse* near Aden during Operation Desert Shield.

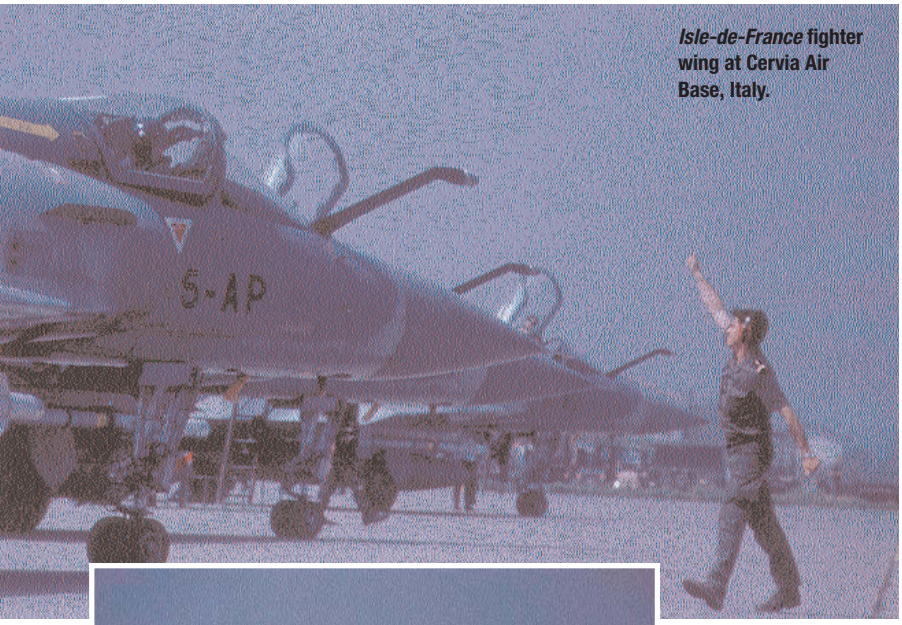
U.S. Navy (John Bouvia)

As a former colonial power with numerous overseas territories, France has commitments around the world. The security of overseas territories is a priority to which "sovereignty forces" contribute in peacetime. They ensure the security of lines of communication and French nationals in foreign territories. France also has a variety of defense agreements with non-European countries (particularly in Africa) which it intends to fulfil; hence the pre-positioned forces in those countries.

Global responsibility is also a duty that comes with permanent membership on the Security Council; thus the French contribution to worldwide crisis management and peacekeeping. France is a leading participant (vis-à-vis the number of troops involved) in U.N. peace operations around the world. In this respect, the French presence in many countries during this century has helped in effectively tackling peacekeeping on the ground. France estimates that its contributions to restoring peace in Cambodia and Somalia were significant and worthwhile. Lessons from these operations and, of course, the experience in Bosnia suggest that there is a need to adjust U.N. structures and decisionmaking processes for peacekeeping. The United Nations should be both better organized and prepared to conduct peace operations at both the political and the political-military levels.

To develop an all-European, overarching security framework requires a single set of rules for the continent to avoid unequal security zones in the post-Cold War world and to prevent conflict by treating the causes—ideally before the first symptoms of a crisis appear. Key to this is maintaining the Conventional Armed Forces in Europe (CFE) treaty and harmonizing the various arms control, security, and disarmament agreements; working toward a more effective implementation of the provisions of the Conference on Security and Cooperation in Europe (CSCE); finalizing a code of conduct on the use of force; and building a "stability pact" based upon regional and bilateral agreements. (The pact is a European Union (EU) initiative based on a French idea aimed at Central and Eastern Europe.)

CSCE has been recognized since 1992 as a regional organization in the sense of the U.N. Charter, which has potentially far-reaching consequences. There is a risk that the United Nations will be financially as well as politically unable (in the case of a



Isle-de-France fighter wing at Cervia Air Base, Italy.

U.S. Air Force (Janel Schroeder)

U.S. Air Force (Janel Schroeder)

Mirage 2000 returning from mission during Operation Deny Flight.

Security Council deadlock) to fulfil all its responsibilities around the world in the future—for instance, in managing more than two or three peace operations simultaneously. Therefore, the prospect of delegating some responsibilities to regional bodies should be explored.

One goal of the all-European security framework should be to avoid the isolation of Russia by allowing that country—which has always been a key player in European politics—to participate fully in the management of security on the Eurasian landmass. Russia views itself as having de facto special responsibility in peacekeeping in the former Soviet republics. The French view is that this should be a cooperative process with operations managed and controlled at a multilateral level.

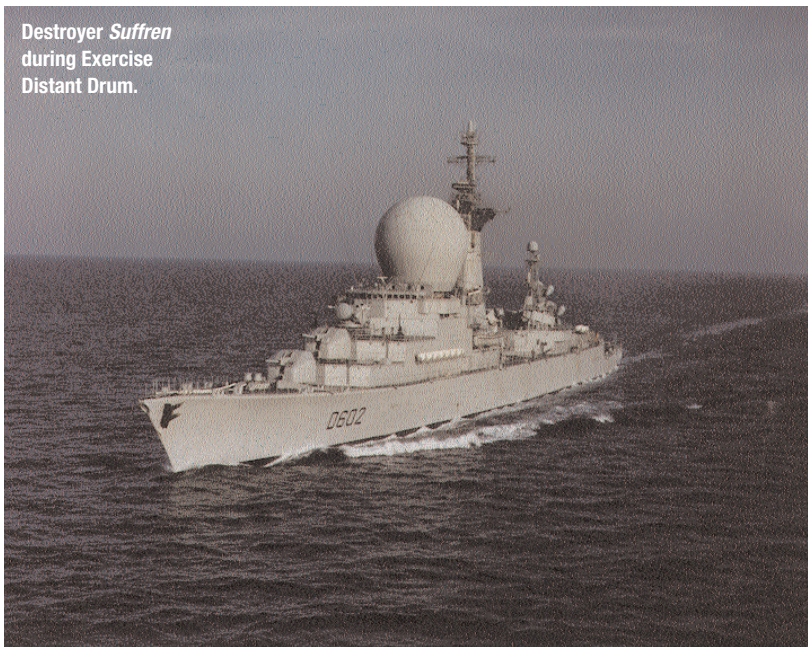
European Identity

The object is not to establish an organization responsible for Europe's collective defense in place of NATO, but to establish the structures and procedures that are required to allow Europeans to act autonomously if necessary. France regards the development of the European Security and Defense Identity (ESDI) as a natural "spin-off" of this construction. Franco-German partnership is key to developing ESDI. Indeed, European construction has moved forward each time France and Germany acted together; and it has slowed each time the two countries failed to agree on a mutual course of action. Initiatives such as the Euro-Corps, an organization with association status in the Western European Union (WEU) for Central and Eastern Europe, or a Franco-German armaments agency, demonstrate that the Franco-German "axis" remains at the edge of ESDI development.

This defense identity will also increasingly rest on Franco-British partnership—not as an alternative but as a complement. The two are much closer on security issues today than in the past. Indeed, their positions in world affairs rest on the same foundations (permanent seats on the U.N. Security Council, status of nuclear powers, experiences of empire, and strong defense efforts). Recently, French and British forces renewed the habit of working together (in Iraq and Bosnia), and the debate on future European security architecture has brought them closer together. Also, a bilateral dialogue on nuclear policy was initiated in 1992. Moreover, a "Mediterranean security partnership" is emerging among France, Italy, and Spain. The three countries launched a Maritime European Force in 1992 which is to be set up within the WEU framework. Italy made a follow-up proposition of a European Rapid Action Force in 1993 which is currently under study.

A satellite observation and monitoring capacity should be at the top of an ESDI shopping list since it is key to autonomy. France has taken the European dimension into account in *Helios* (a military observation satellite to be launched this year) through a memorandum of understanding with its partners in the program, Italy and Spain, aimed at making available high-quality pictures to the WEU Satellite Center located in Torrejon, Spain. Strategic lift capabilities—essential for power projection—may be provided by the Future Large Aircraft (FLA) project.

Finally, the nuclear dimension must be tackled, at least in the long-term, for two reasons. The first is that the European defense project will not be achieved if the nuclear element is left out. The second is that the EU perception of a gap between the nuclear haves and have nots should be avoided. While a European deterrent—in whatever form it might take—is only a distant vision, early discussions on the subject among France and its allies could be useful. France has already initiated a bilateral dialogue on nuclear policies and doctrines with the British.



Destroyer *Suffren* during Exercise Distant Drum.

U.S. Navy

France remains committed to a strong transatlantic link for European security

The Transatlantic Link

France remains committed to a strong transatlantic link for European security. Here again the domestic debate is not over the need for a transatlantic link, but over its nature and form. From the Cuban crisis to the Gulf War and more recently with NATO operations in Bosnia, France has amply demonstrated its reliability as a full partner in the transatlantic Alliance. And, of course, the French commitment to collective defense by NATO in event of a threat against the security of any one of its members remains intact.

But France will not rejoin the NATO integrated military structure. This must be taken by its allies as a fact of life, as opposed to an open issue. Indeed, the new strategic environment as well as peace operations reinforce the belief that this issue is becoming more and more irrelevant. (In this respect, events in Bosnia further confirm this position: decisionmaking on enforcement of the no-fly-zone—when Serb planes violated the U.N. resolution—completely bypassed the NATO integrated command structure.) Instead the Alliance's military structure should be adapted to new realities, especially the need to "politically fine-tune" peacekeeping.

It can be said that the institutional game is slowly shifting from a logic of competition to a logic of complementarity. In this respect, the Alliance's summit in January 1994 was a watershed. On this occasion, the United States gave concrete proof to its allies that it "meant business" when it talked of supporting ESDI. The process of reforming NATO structures and procedures has been initiated and is expected to lead to a radically transformed pattern of cooperation between NATO and WEU. The object is to establish an environment in which Europeans are able to use NATO forces and assets for themselves when the United States decides not to participate significantly in a military operation. As for NATO (or NATO-plus) peace operations, the French doctrine is that of full participation on a case-by-case basis.

France welcomed the major decisions reached at the summit. In particular, it supported the prospect of setting up a Combined Joint Task Force headquarters and is ready to play an important role in this effort although it is clear that this will imply adapting the Alliance military structure. And, from the French point of view, this is only a starting point: one may wonder, for instance, whether the current geographical organization of the military structure (as opposed to its budgetary organization) is the best way to deal with the new strategic landscape. One thing is clear: the more flexible the military structure, the easier it is for France to collaborate. As for the Partnership for Peace program, it is an important step toward the rapprochement between Alliance states and their former adversaries, as well as a useful

vehicle to prepare for multinational peacekeeping operations with those countries. Finally, France's part in co-chairing (with the United States) one of two new NATO groups dealing with counterproliferation shows a readiness to play an active role in dealing with potential new threats to the Alliance.

Armor maneuvering during Desert Shield.

U.S. Air Force (H.H. Deffner)

By the beginning of the 21st century, Europe should have multinational forces that can be employed—with pre-defined procedures—in various contexts: NATO, WEU, the United Nations, and perhaps even CSCE. Most multinational forces will probably exist only on paper, a permanent command structure but with units activated or committed only in time of crisis on an ad hoc basis. This network will include Euro-Corps. Fully operational by 1995, Euro-Corps probably should not be expanded beyond the four currently committed nations if it is to remain "usable" (it already is corps-sized, and its deployment as a full-fledged military unit is subject to agreement by member states). The European forces network should also include a rapid action force with land, sea, and air components. Other units currently assigned to NATO should be dual-hatted wherever possible.

reconciling the European priority with national autonomy is the major task for the next century

The existence of this network should guarantee the availability to Western political leaders of tailor-made contingency forces, whatever the political and military situation. Operating on an ad hoc basis, however, is not tantamount to improvisation: thus the need for permanent multinational planning as well as peacetime exercises.

Military Posture

How will the French military posture look at the turn of the century? By the year 2000, the army will probably be comprised of about 225,000 men in eight divisions: three or four heavy divisions; a four-division *Force d'action rapide* (FAR); a division and a brigade with Euro-Corps. Modernization efforts will include *Leclerc* main battle tanks, *Rafale* aircraft, the *Charles-de-Gaulle* nuclear-powered carrier, and Tiger and NH–90 helicopters. The navy will have approximately one hundred ships, including sixty high sea vessels; and the air force will have about twenty combat squadrons with about 380 aircraft.

Nuclear forces will have at least two components: one sea-based which will continue to be the core of deterrent forces (four new-generation nuclear-fueled ballistic missile submarines) and one probably air-based or perhaps land-based. France is fully committed to the comprehensive test ban treaty, but nuclear deterrence remains a national priority.

The political priority placed on intelligence, space, and recently on power projection will bear fruit by 2000. But current major programs are a heavy drain on the defense budget because of their simultaneity. For France in the 21st century most major programs will probably take place in a European framework.

Reconciling the European priority with national autonomy is the major task of developing France's defense for the next century. This task will be made easier as the vital interests of EU members become more and more intertwined. JFQ

RUSSIA and a Changing Europe

By DIETRICH GENSCHEL

PT–76 light amphibious tank.

U.S. Navy (Mark Kettenhofen)

The Russian Federation is reclaiming an independent and decisive role in shaping Europe's future security much sooner after the fall of the Soviet empire than anticipated. Federation relations with the West seem to be more complicated and ambivalent than they were during the short period of cooperation when they followed mainly Western models and prescripts. Thus it is important to develop a reasoned appreciation of Russian policy and its likely influence on European security. This assessment analyzes the security challenges facing the Federation as well as politico-military responses to such challenges. It takes a critical look at the ambiguous signals attributed to political elites and addresses specific questions about Russian foreign and defense policy. The assessment concludes with ideas of what a security system in Europe might look like in the future.

the end of the Cold War confirmed the effectiveness of NATO's capabilities

The Current Situation

Russia is the largest European country in terms of area, population, and resources, and the only one with a Eurasian dimension which, in turn, makes it a global power. Russia shook off a communist dictatorship without bloodshed, bringing the Cold War to a nonviolent end. It suffers from social and economic hardships related to the transition from communist rule to democracy with a market economy. The reform process is not progressing successfully. The December 1993 elections did not produce a reform-minded majority, though a simultaneous referendum gave birth to a democratically legitimized constitution. Most reformers in President Yeltsin's cabinet resigned or were not reappointed. Yeltsin has retained little if any authority to exercise the power that the new constitution vested in him. The best evidence of this fact was his inability to prevent giving amnesty to those involved in the abortive 1991 coup and in the revolt by parliament against him in October 1993. The various bureaucracies are the main shaping factors of policy, each following its own agenda with little or no coordination. The State Duma displays hectic activism in interfering with government policy without working on much-needed laws to support further reforms. The economic, social, and legal situation is in a deplorable state. Russians have experienced only a caricature of what democracy and market economies truly mean in the West. Organized crime and corruption permeate the entire society. Many Russians, who saw their country as the center of the Soviet Union and Warsaw Treaty Organization (WTO), grieve over the loss of their role in Europe and the world as well as their self-image. There is a widespread feeling of deep humiliation.

The end of the Cold War validated Western democracy and market economies. At the same time it confirmed the effectiveness of NATO's collective deterrent and defense capabilities. NATO has welcomed the end of the Cold War as a momentous event in which there are neither victors nor vanquished but only winners. The Alliance immediately extended the hand of friendship to its former adversaries. All WTO members, including the Soviet Union at that time, grasped that hand and concurrently voiced hope for far-reaching Western assistance in almost every aspect of society, particularly economics. Since expectations were grossly exaggerated and did not take into account economic difficulties in the West, assistance was seen by many as insufficient. Moreover, insofar as aid was forthcoming, some denounced it as patronizing and an insult to the nation's pride. This has resulted in deep, widespread disappointment. It is in this atmosphere that Russia searches for a way out of economic and social chaos, a new identity, and an appropriate role in Europe and the world. Accordingly, Russia has begun to define its security interests independently of Western advice and assistance.

Questions of Security

The most pressing challenges facing Russia are internal, namely, improving economic and social conditions, transitioning to a market economy, developing democratic institutions, building a pluralistic culture, combating crime and corruption, fostering the rule of law, and holding together

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the Russian Federation. But there are external challenges. While its military doctrine postulates no state as an enemy and assumes the danger of widespread war is considerably reduced, Russia sees existing and potential dangers that could become military threats. The obvious dangers are conflict along its borders, proliferation of weapons of mass destruction, and limited nuclear aggression. Others include "suppression of rights, liberties, and legitimate interests of Russian citizens living outside the Russian Federation" and "enlargement of military blocs and alliances to the detriment of the military security interests of the Russian Federation" which can lead to misunderstanding. The doctrine also entails military dangers internal to the Russian Federation against which armed forces may be employed. According to Foreign Minister Kozyrev, a repetition of the "Yugoslav drama" in the former Soviet Union is the worst of all possible scenarios.

There are legitimate interests on Russia's part in the stability of the former Soviet republics and efforts to bind them closer in the Community of Independent States (CIS)—endeavors labeled as "reintegration." Russia also wants to cooperate with Central and Western Europe and especially with the United States, from which it anticipates help in implementing the Alma Ata, Minsk, and Lisbon agreements as well as in transferring all nuclear weapons from former republics to Russia. Cooperation with NATO meets with reluctance and misgivings as seen in the range of reactions to the Partnership for Peace (PFP) program while developments in Bosnia-Herzegovina encouraged Moscow to eventually agree with NATO's role. Russia sees security challenges in the violent ethnic, national, and religious conflicts in Georgia, Armenia/Azerbaijan, Tajikistan, Moldova, and former Yugoslavia. A great challenge for Russian foreign and defense policy is in forging the kind of common European security system in which Russia, on an equal footing with NATO, might play a major role.

Matters of Policy

As previously noted there are forces attempting to shape Russian policy in uncoordinated ways that give pause for concern. The presidential apparatus and the ministries of foreign affairs, defense, internal security, finance, and economics are important actors, together with voices from the Duma and Federation Council. Yet certain general tendencies can be observed. Russia seems to be increasingly withdrawing from the pro-Western orientation it followed under Gorbachev and against Western values and institutions, with NATO again often portrayed as the main antagonist. Moscow is more and more following a nationalistic course, pursuing what it sees as its security interests as a global power of Eurasian dimensions. Its policymakers are thus echoing an internal mood that turns increasingly against reform which is criticized for leaning too heavily on Western models and recipes.

Efforts to strengthen CIS—intended to encompass every former Soviet republic except for the Baltics—is predominant. Various factors facilitate such efforts: economic dependence (energy in particular) of the republics on Russia, ethnic and other conflicts that the republics are unable to solve without Russian interference, large Russian or Russian-speaking minorities in the republics, lack of experience as independent states in combination with habitual subordination over centuries under Russian rule, and family bonds and kinship. These factors give Russia ample opportunity to exert political, economic, and military influence to reintegrate former Soviet republics into a larger community. Moscow is not without success. CIS consists of twelve states, nine of which form a collective defense group, that the Russian authorities claim will be an alliance of truly independent states, not a reinvigorated Soviet Union. But there is doubt about the true freedom, for instance, of Georgia or Moldova to join CIS and its defense component. On the other hand, Russia is the center of gravity in Eastern Europe, and without massive and continuous Western assistance, small and economically weak states will not be able to resist Moscow's carrot-and-stick policy for long. Even if CIS membership does not conform in all cases with Western standards of voluntarism, the community can and should become one of the international organizations which form part of the "network of interlocking institutions" designed to contribute to European stability and security.

Russia is a member of the North Atlantic Cooperation Council (NACC) and the Conference on Security and Cooperation in Europe (CSCE) and an associate member of the North Atlantic Assembly—institutions in the European network—as well as a member of the United Nations and the Security Council. Thus Russia has a broad range of possibilities for participating in European security discussions and cooperation and for exerting influence. Russia even influences NATO decisions, as shown in the Alliance's readiness to not enlarge its membership at this time because of Moscow's concerns. However, Russia shows a real preference for strengthening CSCE and giving it a more operational capability. NACC in the Russian view should then become a military arm of CSCE, independent of NATO, which would diminish the Alliance as the most effective anchor of European stability.

the Russian military has a comprehensive program of reform which extends beyond the year 2000

Russia has decided to join PFP. Although the foreign and defense ministers initially voiced support, a majority of the factions in the Duma seemed to be opposed. There has been a tendency to propose the entire CIS as partners, accompanied by efforts to change the program's direction and content. By joining PFP, in whatever form, Russia has a chance to fashion a relationship with NATO and its member states in accordance with its own policy objectives.

Military Answers

To meet security challenges the Russian military has outlined a comprehensive program of reform for the armed forces which extends beyond the year 2000. The reform aims to reorganize, reduce, and modernize the military in stages. A defense law sets the end strength of in-place forces at 1 percent of the population, that is at 1.5 million men and women in the armed forces.

The foundation of military policy and planning is found in "Basic Provisions of the Military Doctrine of the Russian Federation" which was approved by the Federation Security Council and President Yeltsin in November 1993. Main portions of the document have appeared in the Russian press. Since Moscow perceives no particular state as an enemy, force structure as well as deployment and employment planning adhere to a concept of strategic defense, with no fixed frontlines or firm echeloning of forces. Both ground and air forces are structured into covering, mobile reaction, and strategic reserve forces. Covering forces are also to be highly mobile in view of limited personnel and the vast length of Russian borders, designed to mount initial defenses and holding operations until mobile reaction forces deploy. The strategic reserves form the backbone for mobilization and reconstitution of additional forces in larger-scale contingencies. This concept is similar to NATO's new force structure in the framework of the Strategic Concept. There are also Russian formations for peace operations and "other troops" (both border forces and the Ministry of the Interior's troops).

Russia has yet to withdraw all forces from the former Soviet republics. It must be expected that bilateral treaties, which among other things regulate stationing troops in neighboring countries, mean that Russia will maintain forces in former republics. This would allow for the deployment of Russian troops on borders of neighboring states, thereby conducting a kind of "forward defense" outside of its national frontiers. Such a situation is observable in the Transcaucasus and in parts of Central Asia. In geostrategic terms, however, this would represent a remarkable overstretch of the planned end strength of Russian in-place forces. Defense Minister Grachev's intention to increase end strength by 600,000 to more than two million, a plan obviously supported by the President, may be a response to such prospects.

All military reform must contend with the adverse conditions which prevail in the Russian Federation. The armed forces inherited a plethora of problems with the Soviet Union's break-up. Troop withdrawals from Afghanistan, Hungary, former Czechoslovakia, Poland, East Germany, Baltic states, and Mongolia have led to dramatic housing shortages for officers, noncommissioned officers, and military dependents. While numbers vary some 400,000 military personnel and their families may be living in tents, containers, and other inadequate quarters.

(continued on page 30)

U.S. EUROPEAN COMMAND (EUCOM)

MISSION:

To support U.S. interests throughout the area of responsibility, provide combat-ready forces to NATO, and support other CINCs as directed by the National Command Authorities. The other missions of EUCOM include theater-wide management and control of intelligence activities; evacuation of noncombatants in the event of war; ensuring that U.S. forces maintain the capability, personnel, and equipment to carry out assigned missions; management of the security assistance programs; and carrying out all other missions assigned.

U.S. Navy (Darin Osmun)

BACKGROUND:

In the early 1950s, the Secretary of Defense and JCS recognized the need for a joint command in Europe to centralize peacetime control of the Armed Forces in the theater. The United States and NATO had previously agreed that the American general who served as Supreme Allied Commander Europe (SACEUR) should exercise control over U.S. military commands in Europe. Accordingly JCS created a unified command, U.S. European Command (EUCOM), on August 1, 1952, and instructed Army, Navy, and Air Force commanders to report to the U.S. Commander in Chief, Europe (CINCEUR). GEN Matthew Ridgway, USA, the first CINCEUR, established headquarters in Frankfurt as a temporary measure. It was relocated to Camp des Loges in the Forest of St. Germain-en-Laye in 1954. The headquarters remained there until 1967, when it relocated to Patch Barracks, Stuttgart-Vaihingen, as a result of General De Gaulle's request that all foreign headquarters be removed from France. In peacetime, EUCOM forces come under four component commands: U.S. Army, Europe (USAREUR) with headquarters in Heidelberg; U.S. Navy, Europe (USNAVEUR)—including U.S. Fleet Marine Force, Europe—with the commander in Naples and headquarters in London; U.S. Air Forces, Europe (USAFE), at Ramstein AFB; and Special Operations Command, Europe (SOCEUR), in Stuttgart-Vaihingen. In time of war, combat forces fight within the NATO command structure. The Navy and Air Force component commanders also serve as commanders of Allied Forces South (AFSOUTH), and Allied Air Forces Central Europe (AIRCENT), respectively, both of which are NATO major subordinate commands.

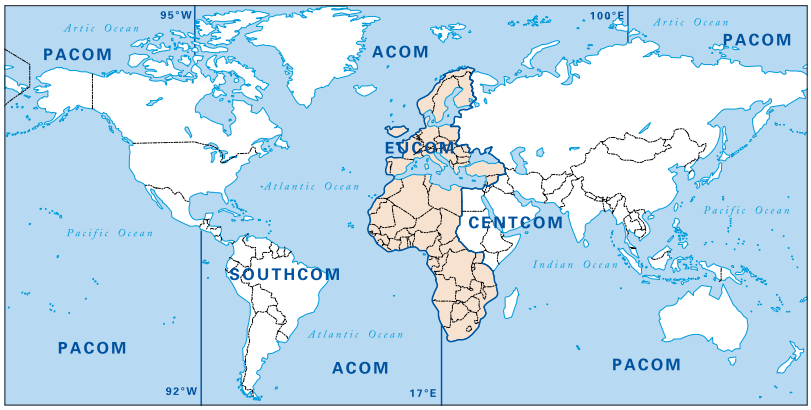
U.S. Air Force (James Bowman)

Combat Camera (Steve Thurlow)

Combat Camera (Mickey L. Foster)

EUCOM Area of Responsibility

NORWAY
SWEDEN
FINLAND
IRELAND
UNITED KINGDOM
DENMARK
NETHERLANDS
BELGIUM
LUXEMBURG
GERMANY
POLAND
CZECH REPUBLIC
SLOVAKIA
ROMANIA
MOLDOVA
BOSNIA-HERZEGOVINA
FRANCE
AUSTRIA
SWITZERLAND
ITALY
SERBIA
BULGARIA
MACEDONIA
PORTUGAL
SPAIN
MALTA
GREECE
TURKEY
ALBANIA
SYRIA
TUNISIA
CYPRUS
LEBANON
ISRAEL
MOROCCO
ALGERIA
LIBYA
WESTERN SAHARA
MAURITANIA
MALI
NIGER
CHAD
SENEGAL
THE GAMBIA
BURKINA FASO
GUINEA-BISSAU
NIGERIA
GUINEA
CENTRAL AFRICAN REPUBLIC
SIERRA LEONE
CAMEROON
GHANA
BENIN
LIBERIA
COTE D'IVOIRE
TOGO
CONGO
UGANDA
GABON
ZAIRE
RWANDA
BURUNDI
EQUATORIAL GHANA
CABINDA
TANZANIA
ANGOLA
ZAMBIA
MALAWI
MOZAMBIQUE
ZIMBABWE
NAMIBIA
BOTSWANA
SWAZILAND
SOUTH AFRICA
LESOTHO



U.S. Navy (Pete Hatzakos)

MiG–31 Foxhound.

(continued from page 27)

Increases in salaries and pensions do not match exploding prices in markets, and soldiers often have to wait several months to be paid at all.

Severe shortages of infrastructure exist. Areas where the Soviet "First Strategic Echelon" was deployed had the best infrastructure, but those areas are in non-Soviet former WTO countries, especially Belarus and Ukraine, that are now independent. Units which have not been disbanded must be crowded into substandard facilities, particularly in the western parts of Russia where they are not needed strategically which, in turn, raises security concerns among Russia's neighbors. Furthermore, while there are too many officers and NCOs, there is a dramatic lack of conscripts. Draft exemptions have recently been tightened, but several hundred thousand young men per year do not show up to perform their military service.

Modernization programs are stretched or canceled for lack of funding. No new combatant ship has been laid on keel for two years. On the other hand armament industries are still producing weapon systems with state subsidies to pay the workforce, while the state cannot procure systems for its own forces and tries to increase arms exports to markets which are already saturated. These conditions inhibit reform and impact negatively on morale, unit cohesion, readiness, and self-esteem.

Despite these difficulties the military has generally been obedient to its political masters. The provisions of nuclear and conventional arms control treaties are being reliably implemented. New military doctrine acknowledges a changing political situation. Withdrawal of forces stationed outside Russia has been in accord with treaties and stated plans; the pull-out from Germany will be completed this summer and Russia now has a similar undertaking for Latvia. The forces remaining in Estonia will also go home, although they are bargaining chips in a delicate political situation.

So far the Russian military leadership has not taken sides in internal political struggles and has thus contributed to the avoidance of large scale civil unrest. The storming of the parliament last October on orders of President Yeltsin, however, brought the military to the brink of engagement in domestic strife. Yeltsin states in his recently published memoirs that the army initially refused to obey his orders and stormed the White House only after an officer had been shot dead by a sniper. It is questionable whether such revelations strengthen the military's loyalty to their President. If as reported many members of the military voted for Vladimir Zhirinovsky in parliamentary elections last December, it suggests that the loyalty of the armed forces to the political leadership could be strained when it may be most needed.

Ambiguous Signals

The West is attempting to recognize Russia's legitimate security interests, fears of isolation and encirclement by unfriendly forces, and wish to be respected as a large nation. It is meanwhile a truism that European security cannot be safeguarded against or without Russia. This certainly is the position that NATO has followed stringently since the London summit in 1990. In demanding an acknowledgement of its interests, Russia also persistently asks that the West understand certain trends in Russian public opinion, particularly in the wake of success by Zhirinovsky's nationalists in the Duma elections. But such recognition requires an understanding, in turn, on the part of Russia for the security interests of its neighbors, especially the small, new states. Russia needs to accept another truism, that

European security cannot be safeguarded exclusively on its terms either. Such an understanding is currently lacking.

The West tends to forget that Russia itself fell victim to suppression by the Soviet regime. Countries that have suffered under communist dictatorships need time to develop trust in the new Russia and to forget that the language of the Soviet empire was Russian. This applies to the Baltic states as much as it does to the non-Soviet former WTO members. The more Russia claims to be a great power entitled to special treatment, the more it disregards the impact that its behavior has on its immediate neighbors which is detrimental to regional stability. A growing number of Russian political figures not only shows little comprehension of this problem but, on the contrary, conveys ambiguous signals to neighbors, both near and far.

There is not only a lack of clearcut opposition to nationalistic, imperialistic, and old-style communist rhetoric used by new extremist factions in the State Duma, but an increasing similarity between statements by Russian officials, President Yeltsin and Foreign Minister Kozyrev included, and those of Zhirinovsky. Assertions like those of Kozyrev that the Baltic states were engaged in "ethnic cleansing" of Russian minorities—or "apartheid" as Defense Minister Grachev put it—are particularly brazen. Related to this assertion is a claim that the so-called "Near Abroad" constitutes a sphere of geostrategic importance and, accordingly, is of vital interest to Moscow, a condition that would even legitimize stationing Russian forces in those countries.

Another ambiguous signal is the strong resistance to any eastward expansion of NATO. According to a study by the Foreign Intelligence Service in December 1993, enlargement would bring "the largest military grouping" within immediate proximity of Russia's borders, impinging negatively on its security interests. Such assessments reveal a deplorable lack of knowledge about NATO's true nature and constitute remnants of outdated thinking about confrontation and conflict. The height of adversarial rhetoric came when NATO's resolve to launch air strikes against artillery positions around Sarajevo at the request of the Security Council was labeled by Zhirinovsky as a step toward World War III. This language, of course, was never used by government officials. It is only fair to state that declaratory foreign policy is often aimed at appeasing extremist political groupings within Russia, while actual conduct of foreign and defense policy vis-à-vis NATO and Russia's neighbors is generally more cooperative and less confrontational. Nevertheless, against the historical backdrop of communist domination and threats, any imperialistic or confrontational rhetoric resonates badly in the minds of former victims. Addressing such issues disingenuously does not contribute to mutual security and trust, but rather shows a lack of reliability and rationality on the part of a self-perceived global power, especially one with a huge nuclear weapons stockpile.

NATO's Expansion

It is worthwhile examining Russian fears of formal extension of NATO membership into Central Europe in more detail. As was to be expected, the NATO summit in January 1994 did not embark on immediate enlargement. But the heads of government stated that NATO is not a closed shop and that eventual extension was in the cards. The remaining issues involve the time-frame and candidates for membership. These questions remained not only because of Russian fears of isolation and the rise of new divisions in Europe, but because the United States was concerned over endangering the fragile relationship between the powers, notably in nuclear arms reduction. Also, there are NATO members—particularly in southern Europe—who fear enlargement because the assistance they have received from the richer allies may be redirected to new allies in the east.

Also bearing on the eventual expansion of NATO and related Russian apprehensions is the status of the Visegrad countries—Poland, Czech Republic, Slovakia, and Hungary—which are the most likely to be considered first as candidates for full NATO membership. Political, economic, and military reforms in the Visegrad group are well advanced, and those states form a geopolitical entity. They have no direct borders with Russia, have associate status within the European Union, and are members of the Council of Europe. Compared to their neighbors to the West, however, their democratic institutions and political culture remain fragile.

NATO membership would serve to enhance internal stability and speed the adoption of a democratic culture. The Visegrad states see themselves in a security vacuum and instinctively distrust a reinvigorated Russia, feelings that are destabilizing and are fertile ground for extremist political agitation. NATO membership, which implies alliance with the United States, could militate against this insecurity, dampen anti-Russian phobia, and provide a sense of belonging. The latter is a psychological factor and more important than extended nuclear deterrence or stationing NATO forces in Central Europe. At the same time, membership in the Alliance would incline the Visegrad states to resolve outstanding disputes over such issues as minorities or borders. NATO's record provides ample evidence of its potential to democratize, pacify, and lead—over and above deterrence and collective security. To extend these qualities to the Visegrad group would stabilize Central Europe, something in which Russia should have a clear interest. With enlargement Russia would have in its immediate vicinity a cooperative, defensive alliance of democratic states whose history corroborates a peace-generating and peace-maintaining character that Russia already enjoys. Moscow should welcome such a development. Democracies are safe neighbors—they rarely attack others—so Russia could have stability on its western borders and turn its energies towards regions and risks that President Yeltsin, in his letters of September 1993 to Western heads of government, described as almost exclusively stemming from the area to the south.

Moscow apparently decided that peace operations in former Soviet republics are its responsibility

Russia will participate in PFP, but whether this alleviates its concerns remains to be seen. Russia wants to be treated as the equal of NATO in political and strategic terms. Thus an increased relationship between the Alliance and the countries of Central Europe should be accompanied by a differentiated approach to dealing with Russia in recognition of its global status. Moscow needs to be fully involved in the process but without a veto on decisions which in the final analysis must be based on NATO's interests. An eventual extension of NATO membership will doubtless require a revision of the Reduction of Conventional Forces in Europe (CFE) Treaty.

Peace Operations

Related to the Russian attitude toward the "Near Abroad" are peace operations in former Soviet republics. Crises and conflicts in Central Asia (Tajikistan), Moldova, and Transcaucasus have resulted in extensive peacekeeping and peace-enforcing operations conducted either unilaterally by Russian national troops or by the Russian military in cooperation with indigenous forces. Moscow apparently decided that peace operations in former Soviet republics are its responsibility, critical to its security interests. Russia does not see a role for NATO or other Western participants in these operations. On the other hand, Moscow has asked for a formal blessing and even funding from the United Nations or CSCE. And the West has not shown an inclination to participate in these operations, particularly not with troops. Here Russian and Western attitudes are complementary. The result could be regarded as a certain sub-regional division of labor in peace operations between Russia and the West. As long as such operations are carried out on the basis of CSCE consensus with participants applying common rules, this kind of differentiation is unproblematic and possibly unavoidable. However, to provide for a commonality of principles and their application, observers should be deployed at a minimum. A broad multinational mix of forces under a unified command would, of course, be preferable.

NATO and WEU—with conceptual support of the NACC—are about to create appropriate force and command structure elements called combined joint task forces (CJTFs) to do just that. This should make collective action by NATO possible, or by the entire WEU using NATO assets, but in either case with possible participation by CIS or individual CEE countries or other members of CSCE. The NACC Ad Hoc Group on Peacekeeping has already developed guidelines for the common planning, exercising, and conduct of peace operations. In the future CIS could provide for similar cooperative peace support guidelines.

A like-minded readiness by NATO, WEU, and CIS to mount peace operations under either U.N. or CSCE mandate with variable forms of mutual participation would enhance confidence on the part of nations prone to internal conflict and the possible subjects of future peace operations. This would reenforce U.N. and CSCE credibility since they could employ effective organizations without forsaking political direction and control. This, in turn, would militate against suspicions that international organizations or individual nations could use peace support operations to expand or secure their own spheres of influence at the expense of others.

U.S. Navy (Mark Kettenhofen)

Naval infantry with BTR–60PBs and Pomornik class air cushion landing craft.

A Lack of Clarity

To better understand Russian security policy and its military dimension, some questions need to be answered. These questions are based partly on Russian military doctrine and partly on developments within the Federation. Military doctrine sees dangers in cases of "undermining of strategic stability" and "destruction of the existing power balance." This raises the question of the Russian criteria for strategic stability and the balance of power. If there are military "dangers" and "threats" there must be, by implication, military response options. What are the military reactions to an "expansion of military alliances" if this refers to NATO or WEU, and expansion follows the sovereign will of a state and consensus of alliance members? What are the military reactions to "suppression of rights and liberties of citizens of the Russian Federation living in foreign states?"

This doctrine foresees using force in cases of internal danger to the Federation's security. What are the thresholds above which military formations will be used inside the Federation? Will deployment be conducted under the leadership of the armed forces or police? Which state organ has authority over such deployments? Does the force structure of covering, mobile, and reserve forces also apply to the navy? What is Russia's future maritime role?

In the PFP program what will constitute the special relationship with NATO that Moscow envisages in recognition of its status as a global power? How would it differ from the non-special role that the United States, as a global power, played as a member of the Alliance?

How, in terms of manpower and capital resources, can far-reaching and expensive military reforms be completed given the severe economic difficulties and drastic claims of other segments of the Russian government for a bigger slice of the pie? (The present struggle between the defense minister and, for instance, the agriculture minister about a higher share of the 1994 budget sounds terribly familiar to the Western ear.)

Russia hopes to increase its exports of military hardware. Military doctrine justifies this as necessary to support reform and the labor force in defense industries. President Yeltsin announced a planned increase of arms exports from $2 billion in 1993 to $49 billion in 1994. Are such plans in concert with the planned conversion of defense industries? And if Iran, as it now appears, is a recipient of a large amount of this Russian hardware, does this not strengthen those forces which Russia fears on its southern borders? Should not the experience of arming Iraq provide a reason for caution?

Defense Minister Grachev, supported by President Yeltsin, requested a revision of parts of the CFE treaty because certain provisions allegedly were negotiated under strategic conditions that differ completely from the present situation. In particular the "flank rule," limiting forces in both the Leningrad and North Caucasus military districts, supposedly inhibits peace operations on Russia's southern borders. The Western parties to the treaty have developed a comprehensive set of questions for Moscow on the reasons for and background to this request. (For instance, why are heavy weapons limited by the treaty needed for peace operations?) Answers to these questions are important in light of the central role which this arms control treaty and its implementation have for security and stability in Europe.

the former Yugoslavia indicates that the system of interlocking institutions has not worked

Collective Security

In an effort to allay Russian apprehensions vis-à-vis NATO, a specific treaty of cooperation and peaceful relations and, if necessary, even nonaggression between NATO and Russia or CIS could be made part of the treaty network. It could act as an institutional linchpin to recognize the particular role of Russia and NATO as the two main centers of gravity in Europe. Such a treaty could very well be the main result of the Russian-NATO PFP.

Looking at the former Yugoslavia indicates that the system of interlocking institutions has not worked successfully. However, when the crisis broke out the system had barely existed at all. But meanwhile a pattern is emerging which indicates how the interplay of actors and regulations could work, if there is the political will to make it work and to do so early enough. The pattern is exemplified by the Croat-Bosnian Muslim agreement signed in March 1994 in Washington and by subsequent events in and around Sarajevo.

In December 1993 the German and French foreign ministers, Jupé and Kinkel, advanced an initiative to retain Bosnia-Herzegovina as home for three separate entities. The bilateral initiative was received positively by the EU which pledged multinational support. At that time Washington was still reluctant to become involved in settling the imbroglio in Bosnia. But NATO had already declared that in event of agreement on the Bosnian peace plan, it would provide military support for its implementation. In this the United States indicated a willingness to participate. Indeed, the continuing siege of Sarajevo by Bosnian Serbs brought about a stronger U.S. engagement in the NATO framework, as seen at the NATO summit in January 1994 when intra-Alliance cohesion and resolve were beefed up.

The turning point came on February 5, 1994, with the shelling of the Sarajevo marketplace which took a terrible toll in lives. NATO issued an ultimatum to carry out air strikes, based on Security Council resolution 836 of June 1993, which represented a credible threat of internationally legitimized use of force. What followed was the close cooperation between NATO and the U.N. Secretary General and the delegation of release authority to the Secretary General's representative in theater to ensure U.N. legitimacy in the actual use of force. The Bosnian Serbs abided by the demands of the ultimatum and withdrew their heavy weapons. The shoot-down of four Bosnian-Serb aircraft demonstrated the resolve and capability of NATO to apply force, thus creating a degree of deterrence and increasing the credibility of future threats to use force.

Russia had not insisted on a further Security Council resolution before implementing the NATO ultimatum but launched an anti-ultimatum propaganda campaign aimed primarily at strong domestic misgivings vis-à-vis the use of force in general and by NATO in particular. At the same time, however, Moscow exerted a strong influence on the Serb side to react rationally, making use of its special relationship with Serbia. For the first time a kind of political balance was developing in former Yugoslavia, with America and Russia engaged on the Croat-Bosnian and Serbian sides, respectively, in support of a peace plan which included all warring parties. This engagement has been underpinned by the threat that force ultimately might be used if the agreement is breached.

Developments in and around the town of Gorazde following the events in Sarajevo initially seemed to offer little hope that the pat-

U.S. Navy (Nathan Jones)

Russian Krivak I class frigate *Bditelny* with German frigate *FGS Karlsruhe*.

tern will be effective elsewhere. But, although very late and only after heavy civilian losses, a similar combination of threatened force and diplomatic activity, with strong Russian involvement, induced the retreat of Bosnian Serbs from the town. It certainly was helpful that Russia's special envoy for Bosnia-Herzegovina, Vitaliy Churkin, finally succumbed to the same frustrations that Western negotiators had experienced in the face of Serb cynicism. Russia is now involved in multilateral peacekeeping and peace-enforcing in Bosnia-Herzegovina, and has abandoned its unfounded accusations that NATO is a warmongering organization. Russia has openly conceded that under certain conditions enforcement operations are needed to manage crises and contain conflicts. Foreign Minister Kozyrev has explicitly agreed that for the moment NATO is the only agent that can exercise such force effectively.

Nobody can yet be sure how long the recent chain of successes will hold. But with every success the interplay will become more subtle and the actors more experienced. There is increasing probability that action will be taken in time rather than too late, as has been the case so far. Mutual trust and confidence among participants in operations will grow as the deterrent impact on warring factions increases. So the disaster in Bosnia-Herzegovina may have a positive result in the closer involvement of Russia in multinational peacekeeping. Policymakers in Moscow may understand that cooperating in peace operations does not diminish its status, not even in the "Near Abroad," but rather improves the prospect for success. In the newly established "contact group," Russian diplomats now sit at the negotiating table with American, U.N., and EU representatives. Russia's request for recognition of its role as an equal partner has been fulfilled, at least in the important arena of European security. Closer involvement of Russia on an equal footing in containing the conflict in Bosnia-Herzegovina and in finding a political solution eventually may also improve the prospects for successful implementation of the peace plan that finally emerges. Its implementation will need underpinning by strong and effective peacekeeping forces. To accomplish this mission, fighter aircraft will no longer suffice. Ground troops in numbers much greater than present levels will be required. Without Russian formations, sufficient numbers will hardly be possible.

It remains to be seen whether the present political leadership in Moscow is willing and able to explain its role in Bosnia-Herzegovina in a balanced way domestically, portraying it as a success which serves Russia's security interests as well as its desire for recognition as a great power. As noted, the prevailing mood in Russia is introspective, self-pitying, and anti-Western. However, the emerging pattern of cooperation between the United Nations, the West, and Russia in Bosnia-Herzegovina may be a harbinger of Russia's future international role. If collective security in Europe is to remain an illusion, cooperative security should be an attainable goal. Russia will continue to be different from the West in many respects; but it should never again be antagonistic to the West. To encourage and sustain a constructive role for Russia in European security is a crucial task for Russian and Western leaders alike. **JFQ**

Partnership FOR PEACE

Secretary of Defense William Perry (center) flanked by Polish Minister of Defense Piotr Kolodziejczyk and GEN George Joulwan, SACEUR, at the Pentagon in March 1994.

DOD (Helene C. Stikkel)

Stabilizing the East

by JEFFREY SIMON

NATO has grappled with a Europe in transformation since the revolutions of 1989 and has reached out to countries of the former Warsaw Pact since its July 1990 declaration. The Alliance had to decide how to accommodate the East after the November 1991 Rome summit adopted a new strategy to replace the doctrine of Flexible Response which dated from the late 1960s. The summit also began to deal with the challenges of the post-Cold War era by establishing the North Atlantic Cooperation Council (NACC) to address Europe's eastern security issues.

While NACC had laudable goals, its limitations were obvious. The disintegration of the Soviet Union in late 1991 and the decision to include former republics as new members meant that rather than the anticipated five non-Soviet Warsaw Pact states and the Soviet Union, NACC would have twenty-plus new members. The great diversity among NACC partners (for instance, between Poland and Uzbekistan) led to demands for differentiation and membership in the Alliance by many NACC members. Thus, despite well-intended goals, demands placed on NACC by cooperation partners made the organization's lack of preparation evident. NATO's most recent response came in January 1994 when the North Atlantic Council (NAC) adopted the Partnership for Peace (PFP) program.

The Track Record

NATO responses to developments in the East—first to former Warsaw Pact members and second to new states emerging from the disintegrated Soviet Union—have been extraordinary and insufficient. The institutional response has been extraordinary in that many new initiatives have been taken in a short time. They have been insufficient in that events moved so quickly that NATO's responses have not kept up with regional expectations.

London Declaration. Only months after the revolutions of 1989, NATO extended a "hand of friendship" to the East at the London summit in July 1990. NATO asked the six members of the Warsaw Pact—Poland, Czechoslovakia, Hungary, Bulgaria, Romania, and the Soviet Union—to address the NAC in Brussels and enter into regular diplomatic liaison to share ideas and intensify military contacts in an era of historic change.[1] That summer newly appointed liaison ambassadors from the Warsaw Pact participated in briefings at NATO headquarters.

NATO responses to developments in the East have been extraordinary and insufficient

East German Absorption. The transformation of East Germany from a key Warsaw Pact member to part of a unified Germany in NATO was unexpected and rapid. The Soviet position on the security framework for Germany underwent mercurial changes. While Mikhail Gorbachev refused to accept a Germany-in-NATO framework in a meeting with George Bush in June 1990, his concession to Helmut Kohl the following month indicated that he had little choice in the matter. In reality the Soviets ceded control when the former German Democratic Republic (GDR) failed to stabilize its situation as a reformed communist state in late 1989; *de facto* unification occurred with the economic and monetary union of the two German states. The Soviets also decoupled political unification from security issues in conceding that all-German elections could occur irrespective of the two-plus-four agreement of September 1990.[2] With unification in October 1990, Germany's five new eastern *Laender* (the former GDR states) enjoyed protection under article 5 of the NATO treaty: "an armed attack against one . . . shall be considered an attack against . . . all." This expansion eastward by the Alliance occurred without the need for a new protocol of association as employed on the accession of Greece and Turkey in 1951.

Copenhagen NAC. NATO took another step at the Copenhagen NAC session on June 6 and 7, 1991 when the allies agreed to implement a broad set of further initiatives "to intensify . . . [NATO's] program of military contacts at various levels"[3] with Central and East European (CEE) states. CEE contacts would be intensified with NATO headquarters, Supreme Headquarters Allied Powers Europe (SHAPE), and major NATO commands; in addition, NATO would invite military officers from CEE to its training facilities for special programs on civilian oversight of defense. Experts would meet to discuss security policy issues, military strategy and doctrine, arms control, and conversion of defense industry to civilian purposes. NATO invited CEE experts to participate in "Third Dimension" scientific and environmental programs and exchange views in areas such as air space management. NATO information programs also were expanded to the CEE region.

NAC Ministerial. NATO treated all former Warsaw Pact countries alike until August 21, 1991. During the attempted coup in Moscow, a NAC ministerial statement differentiated the Soviet Union from other former Warsaw Pact states in suspending liaison "pending a clarification in that country." The statement also noted:

> *We expect the Soviet Union to respect the integrity and security of all states in Europe. As a token of solidarity with the new democracies of Central and Eastern Europe, we will develop ways of further strengthening our contribution toward the political and economic reform process within these countries. Our diplomatic liaison arrangements with the Central and Eastern European democracies now take on added significance.*[4]

Rome Declaration. At a summit in Rome in November 1991, NATO approved broadening its activities with the Soviet Union and CEE to include meetings with NAC at the

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ministerial level in NACC, NAC at ambassadorial level, NATO subordinate committees (including the political and economic committees), and the Military Committee and other NATO military authorities.[5]

North Atlantic Cooperation Council.[6] In December 1991 the foreign ministers of "former adversaries" (including Latvia, Lithuania, and Estonia) met at the inauguration of NACC to adopt a "Statement on Dialogue, Partnership, and Cooperation" which endorsed annual ministerial level NACC meetings, bimonthly NAC meetings with liaison ambassadors beginning in February 1992, other NACC meetings as circumstances warrant, and regular meetings of the political, economic, and military committees with liaison partners on security and related issues.

the CEE states believe that more than meetings are needed to secure European peace

Activities snowballed during 1992. At a meeting in February at ambassadorial level NACC adopted a "Work Plan for Dialogue, Partnership, and Cooperation." An extraordinary meeting in March 1992—which extended membership to 35 states (including former Soviet republics except Georgia)—endorsed an approach to planning, conversion, economics, technology, societal challenges, information dissemination, policy planning consultations, and air traffic management.[7]

NACC defense ministers (with Georgia but less France) met for the first time in April and decided to convene a meeting of NACC chiefs of defense staffs (CHODS), a high-level seminar on civilian control of the armed forces, and workshops on restructuring and environmental clean-up of military installations.

Out of Area Peacekeeping

In addition to creating NACC, the Rome summit in 1991 adopted a new strategic concept to replace Flexible Response. This concept moved NATO's military emphasis away from massive mobilization toward enhanced crisis management and peacekeeping operations.

Oslo NAC. In June 1992 NAC foreign ministers convened in Oslo and agreed "to support, on a case-by-case basis in accordance with their own procedures, peacekeeping activities under the responsibility of CSCE (Council on Security and Cooperation in Europe)."[8] NATO moved "out of area" immediately after, and with the Western European Union (WEU) dispatched naval units to the Adriatic to enforce a U.N. embargo. Many NACC members saw this as a chance to broaden cooperation with NATO, and their foreign ministers attached "particular importance to enhancing the CSCE's operational and institutional capacity to contribute to conflict prevention, crisis management, and the peaceful settlement of disputes [and expressed willingness] to contribute."[9]

A NAC ministerial meeting in December 1992 made a parallel offer to the United Nations, noting its readiness "to support peacekeeping operations under the authority of the U.N. Security Council."[10] NACC indicated that NATO and cooperation partners would share their experiences with one another and with CSCE in the areas of planning and preparing for peacekeeping missions and would consider combined training and exercises. It also approved a work plan with specific provisions on peacekeeping and created a NACC ad hoc group on cooperation in peacekeeping to discuss political and conceptual principles and practical measures for cooperation.

Closer cooperation and confidence among NACC partners was evident in February 1993 when the military committee met for the first time in a cooperation session. When NACC defense ministers met in late March they recognized the importance "of the ability to act in a cooperative framework" in peacekeeping tasks and "ensure(d) that a high priority be given this work."[11] In April, under U.N. resolution 816, NATO began no-fly zone enforcement operations over Bosnia-Herzegovina, and the military committee met with CHODS to discuss possible NATO intervention in Bosnia should a peaceful solution fail.

Athens NAC. A NAC ministerial communique in June 1993 noted the development of a "common understanding on conceptual approaches to peacekeeping [and] enhancing of cooperation in this field"[12] with cooperation partners. The Athens NACC in June adopted the ad hoc group's detailed Report on Cooperation in Peacekeeping[13] and agreed to accelerate the program, including sharing experience on peacekeeping planning, training, and logistics.[14] As a result of

Lithuanian *Grisha* class frigate during Exercise Baltops '93.

U.S. Navy (Nathan Jones)

this session, Prague hosted a high-level seminar on the conceptual and doctrinal aspects of peacekeeping.[15]

On balance NATO has been responsive in a short time; but is it enough? The CEE states believe that more than meetings are needed to secure European peace. Because NACC expanded to 36 members rapidly, it is in danger of being "neutralized" as a security institution. How should NATO respond? What roles should NATO and NACC play in a crisis? These questions are raised particularly by the four Visegrad states—Poland, Czech Republic, Slovakia, and Hungary—which express a desire for a differentiated role in NATO. They want criteria and time-lines on becoming Alliance members and they agree to accept NATO security responsibilities.

The Brussels Summit: A Watershed?

Although it took NATO almost a quarter of a century to adopt a strategic doctrine to replace Flexible Response, one can argue that NATO needs another *new* strategic concept because of the disintegration of the Soviet Union, efforts by Russia to reassert influence over the Commonwealth of Independent States (CIS), and insecurities in Central Europe. In addition to evolving more flexible force structures, NATO's strategic tasks aside from NACC should include policies that:

▼ Legitimize democratic leaders in the new states in Europe, and by doing so, help to promote their political, military, economic, and social programs.

▼ Urge sub-regional transparency and cooperation (such as the Visegrad states, Baltics, and Balkans) to discourage ethnic tension and conflict as well as regional arms races. NATO should prevent divergent security perceptions from arising in CEE subregions in order to prevent nascent fault lines in Ukraine from developing into fissures such as in the former Czechoslovakia and Yugoslavia. Likewise, it should work to prevent the Czech-Slovak, Hungarian-Ukraine, and Polish-Ukraine/Belarus borders from becoming a new East-West dividing line, which is more likely to occur with need to control emigration.[16]

▼ Promote psychological security by deepening ties with major Western structures—NATO–NACC, European Union (EU), WEU, and CSCE—and engage Russia and Ukraine in European institutions.

Whether the January 1994 NATO Brussels summit actually was a watershed remains to be seen. It attempted to fuse a flexible force structure for peacekeeping—the so-called combined joint task force (CJTF)—and NATO's need to stabilize the East through PFP. To support a European Security and Defense Identity (ESDI) and strengthen the European pillar of the Alliance through WEU, the summit agreed that in future contingencies "NATO and WEU will consult . . . through joint Council meetings . . . [and] stand ready to make collective assets of the Alliance available . . . for WEU operations."[17] As a result the summit endorsed CJTF in order to facilitate contingency operations, including peacekeeping conducted with participating nations from outside the Alliance.

Though the summit did not accede to Central Europe's desire for immediate membership, PFP did establish NATO's long-term commitment to expansion, leaving vague both the criteria and timelines.[18] Under NAC authority, active PFP participation is deemed a necessary but insufficient condition for joining NATO. Partner states will engage in the activities of political and military bodies at NATO headquarters as well as a Partnership Coordination Cell (PCC) at Mons to "work in concrete ways towards transparency in defense budgeting, promoting democratic control of defense ministries, joint planning, joint military exercises, and creating an ability to operate with NATO forces in . . . peacekeeping, search and rescue, and humanitarian operations. . . ."[19]

While the goals of CJTF and PFP are explicit and can be seen as hedging against possible future problems in the East, their implementation might have immediate, unwitting, and unwanted regional implications. PFP could undermine CEE sub-regional cooperation by turning local actors into competitors; it could also erode domestic support for the region's democratic reformers, fragile civil-military relations, and sub-regional security perceptions and expectations.

A Growing Network of Institutions

LEGEND

■ = *member*
■ = *associate member*
■ = *associate partner*
■ = *observer*

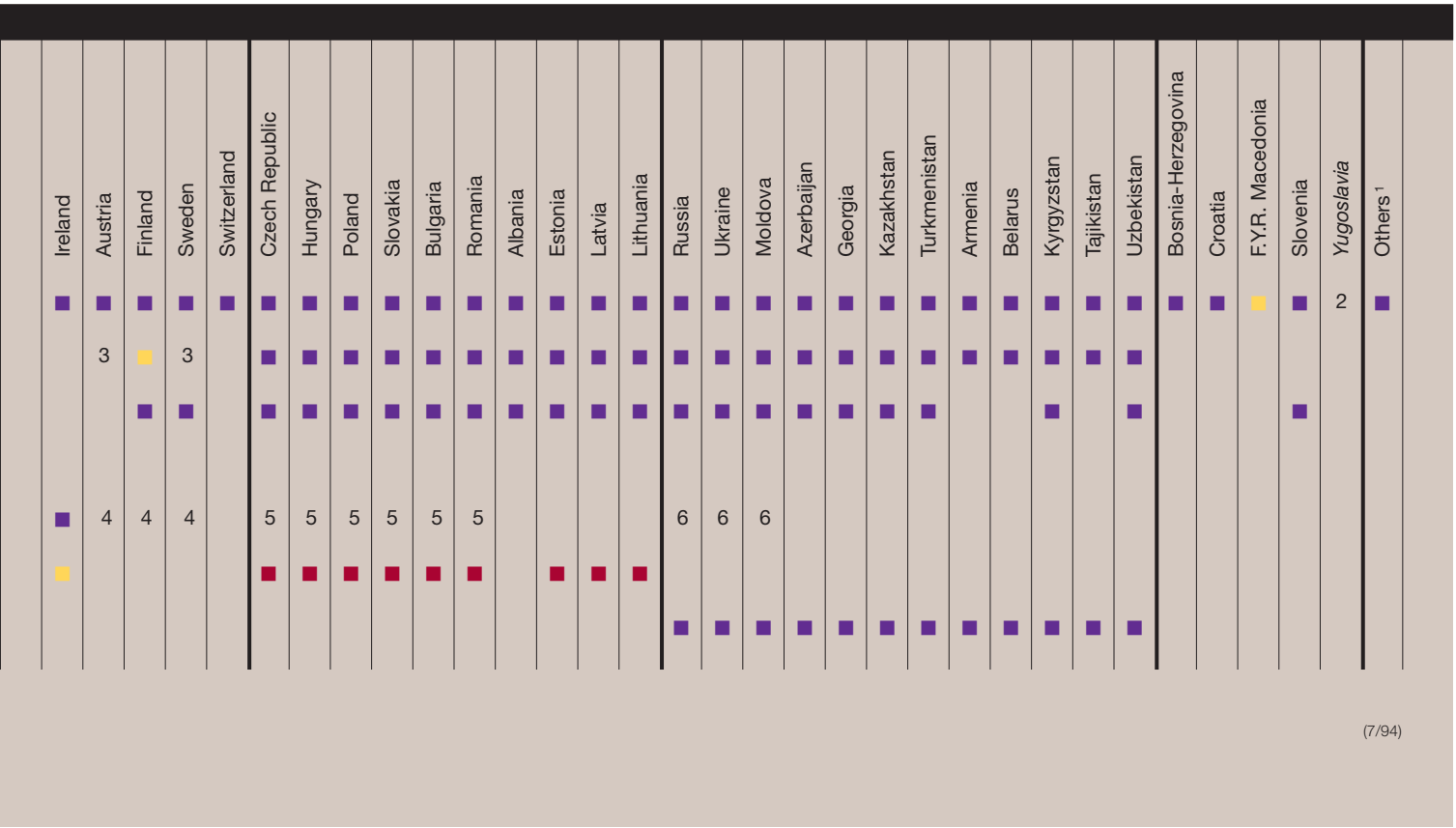
		United States	Canada	Belgium	France	Germany	Italy	Luxembourg	Netherlands	Portugal	Spain	United Kingdom	Greece	Denmark	Iceland	Norway	Turkey
CSCE	Conference on Security and Cooperation in Europe (1972)	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
NACC	North Atlantic Cooperation Council (1991)	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
PFP	Partnership for Peace (1994)	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
NATO	North Atlantic Treaty Organization (1949)	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
EU	European Union, formerly the European Community (1957)			■	■	■	■	■	■	■	■	■	■	■		4	
WEU	Western European Union (1954)			■	■	■	■	■	■	■	■	■	7	■	■	■	■
CIS	Commonwealth of Independent States (1991)																

[1] Includes Cyprus, the Holy See, Liechtenstein, Malta, Monaco, and San Marino.
[2] "Yugoslavia" has been suspended.
[3] Austria and Sweden are not members but, together with Finland (which has observer status), participate in the NACC Ad Hoc Group on Cooperation in Peacekeeping.
[4] Signed but has not yet ratified a "treaty of accession."
[5] Signed "associate agreement."
[6] Signed "partnership and cooperation agreement."
[7] Membership pending ratification.

Sub-Regional Cooperation. In January 1990 Czechoslovakia's President Vaclav Havel visited Hungary and Poland and called on both to coordinate their "return to Europe." Poland, Czechoslovakia, and Hungary met in Visegrad, Hungary, in February 1991 and created the so-called Visegrad triangle[20] to demonstrate the ability of the three to overcome historical differences and deal with their impending withdrawal from the Warsaw Pact, the exit of Soviet forces, and the regional security vacuum as well as to coordinate their eventual "return to Europe." This was to be achieved through institutions like the European Community (EC) and NATO.[21]

In October 1991 a second Visegrad summit in Krakow, Poland, issued a declaration which openly welcomed the Genscher-Baker statement on broadening NATO and stressed their desire to join EC.[22] Indeed since then the Visegrad states have signed agreements of association.[23] Hence, EC plays essential economic and political roles in stabilizing the Visegrad group. These countries have also made NATO membership a priority. At a third summit in Prague in May 1992 they emphasized that NATO and a sustained U.S. presence were of the utmost importance for European security and declared the group's desire to be full members of the Alliance.[24] NATO enjoys great prestige and influence with these countries because it commits America and Canada to maintaining the stability of Europe. At the same time NATO is the only organization that has requisite bases, communications, equipment, and forces to defend Europe.

Between February 1991 and May 1992 the Visegrad triangle held a total of three summits, three meetings of defense ministers, two of foreign ministers, and two each at the deputy defense and foreign minister level. These sessions dealt with economic, political, and military matters and involved the triangle's Eastern security policy and efforts to integrate into EC and NATO. This healthy development toward sub-regional cooperation started to unravel following the June 1992 Czechoslovak elections which led to the "velvet divorce" in January 1993. The separation of the Czech and Slovak Federated Republic into the Czech Republic and



Slovakia did more than draw a new state boundary at the Moravian-Slovak border. Both the psychological and regional security implications have been much larger: the new borders caused the Czech Republic to turn westward, weakened the Visegrad group, and created conditions for potentially isolating Slovakia, resulting in renewed tensions with Hungary and reverberations that extend to Ukraine.

DOD (Helene C. Stikkel)

Secretary of Defense William Perry and Slovak Minister of Defense Pavol Kanis signing a memorandum of cooperation in May 1994.

The January 1994 NATO summit delayed the decision to admit the Visegrad states. Rather than encouraging forms of sub-regional cooperation and stability, the PFP program adopted by the summit has had the unfortunate effect of transforming former regional partners into competitors. By stressing willingness and ability to cooperate in Alliance military activities, PFP rewards those partners who are prepared to get closer militarily to the Alliance first.

The CEE response to PFP varies and reflects unrealistic expectations, misunderstandings, and cleavage within the region. For example, Romania and Bulgaria initially greeted PFP with enthusiasm and relief because it closed off the immediate entry of the Visegrad states into NATO. Formerly fearing that they would be left behind, PFP established a "level playing field" in what has now become the race to join NATO. In the Visegrad group, PFP legitimizes the Czech Republic's goal to achieve NATO membership first, rewards competition over cooperation, and undermines any further prospects for the group's development. In the Baltic, similar competition has resulted.

In order to circumvent the negative consequences of bilateral PFP–NATO agreements and sub-regional competition, NATO should encourage partners to cooperate with their neighbors to minimize the disadvantages of competition and to achieve common goals. It must work to ensure that each agreement remains transparent to neighbors.

Though PFP agreements are bilateral, overall NATO-partnership projects should be crafted and developed along sub-regional lines to encourage Visegrad, Balkan, and Baltic common efforts. For issues such as control of air space, PFP projects can be developed on a sub-regional basis; for issues such as environmental emergencies, the projects could be designed for broader cooperation.

Democratic Reformers. PFP initially represented an effort to placate Russia and to support Yeltsin and Russian "reformers," but it has the undesirable consequence of undermining political support for CEE democratic reformers and, correspondingly, American and Western credibility in the region. This has occurred because Russians and Central Europeans perceive security as a zero-sum game, a situation which has evolved not just from the experience of the 1945 Yalta Treaty and forty years of the Cold War, but also from Yeltsin's so-called "secret letter" to American, German, British, and French leaders condemning NATO's expansion. When Yeltsin expressed alarm over admitting East European countries to NATO, proposing instead that "relations between Russia and NATO be several degrees warmer than the relations between the Alliance and Eastern Europe . . . [and that Russia and NATO together] offer [Eastern Europe] security guarantees,"[25] he gave the zero-sum formula reality. In effect, Central and East Europeans see Yeltsin's proposal as a "Yalta-2" formula for condominium over Central and Eastern Europe.

As Henry Kissinger noted: "No reasonable observer can imagine that Poland, the Czech Republic, Hungary, or Slovakia could ever mount a military threat against Russia, either singly or in combination. The countries of Eastern Europe are terrified, not threatening."[26] To the extent that Central

and East Europeans perceive PFP as an indication of the West succumbing to Russian pressure, the West will lose credibility and influence.

PFP also has significant implications for domestic politics. For as long as the countries of CEE see the West as supporting economic and political platforms to "return to Europe," electoral support for democratic reformers will continue. One message of the Autumn 1993 Polish elections that returned post-communists to power was that the Suchocka government could not demonstrate successful integration into Western institutions, not just NATO but also EU. The same applies to the May 1994 elections in Hungary.

Central Europeans already see a divided Europe, believing that Russia is pursuing an imperial foreign policy

If PFP is to meet Central Europe's international and domestic needs, it must muster enough political and financial power to visibly strengthen the platforms of democratic reformers. PFP will otherwise postpone a decision that NATO has avoided—whether to grant membership to Central Europe. As all new democracies in the East are at risk, the NATO summit may have lost valuable time by not bolstering reform-minded leaders. If PFP fails to generate visible programs, NATO's prestige, influence, and support may be lost on future CEE leaders and their societies. For such projects to succeed, however, financial resources will be necessary.

Civil-Military Relations. Because PFP seeks to develop military cooperation which will ultimately lead to participation in CJTF, political participation is secondary. By stressing military rather than political forms of cooperation, PFP requires the military to develop partnerships with unintended consequences. First, PFP favors states with strong military traditions and institutions (it is easier for Poland to allocate defense resources than Lithuania). Second, civilian control over the military is a new experiment for partners and is tenuous at best. By pushing the military to the fore, PFP jars Central Europe's civilian efforts to control the military. Thus, rather than stressing common values and developing the political pillar of partner cooperation, PFP has elevated the role of the military in domestic affairs and promoted the military pillar in Alliance cooperation.

To mollify the negative impact of PFP it will be necessary to emphasize its political content. Hence, not only should contact among foreign and defense ministers continue, but partner summits should be convened. PFP member states should participate on Alliance committees, and programs should be developed to encourage sub-regional cooperation.

Security Perception—Ideals and Reality. At best, PFP tends to hedge against the possible contingency of Russia turning sour. At worst, it perpetuates an ideal which Central Europeans perceive as an illusion—a Europe that may no longer exist. In the wake of the 1989 revolutions, budding democratic institutions led to euphoria and an idealized image of a "unified" Europe. By making the criteria and time-lines for NATO admission vague, PFP perpetuates an idealized image of an undivided democratic Europe and ignores the realities facing Central and East Europeans.

Central Europeans already see a divided Europe, believing that democratic reform has failed in most of the former Soviet Union, that various forms of authoritarian rule are likely to remain for the foreseeable future, that Russia is pursuing an imperial foreign policy which threatens security, and that their democratic governments are all at risk. For these reasons and others, PFP could fail if it is not carefully implemented. If PFP fails to enhance sub-regional cooperation and stability, provide visible programs which strengthen democratic reformers, bolster civilian control over the military, and enhance psychological and physical security, then NATO likely will be forced to take a position on membership—probably sooner rather than later.

One drawback of expansion in a crisis scenario is that NATO would lose the potential deterrent effect provided by early expansion (for instance, preventing crises from occurring in the first place). Those who argue against expansion claim that it will precipitate the rise of nationalists in Moscow and thus are blind to the deterrent effect of Russian threats and expansion. The split is between those who see NATO expansion as a catalyst for Russian "lawlessness" and others who see it as a deterrent against Russian expansion.[27]

Strategic Implications of Expansion

Any NATO expansion has significant sub-regional and strategic implications. PFP extends NATO's article 4 right of security consultations (but not article 5 security guarantees) to all willing NACC members and non-NACC neutrals who sign "partnership" agreements with NATO. For an unspecified period a partner would channel defense efforts in participation with NATO into a broad range of multilateral missions such as search and rescue, peacekeeping, and crisis management. Then when a partner is able to contribute to NATO force goals and has demonstrated adherence to democratic values, it can become a full NATO member and acquire the article 5 guarantee.

By stressing the above factors, the PFP approach tends to ignore specific criteria for NATO admission, the time needed to achieve those standards, and the strategic and stability impact of the sequencing of CEE members. If criteria for admission were clear, they could provide standards for electorates to judge performance and legitimize the programs of regional leaders. Sequencing membership is also likely to significantly impact on continuing cooperation with neighboring states excluded from the initial round of expansion. For this reason, when NATO does decide to expand it should consider admitting blocs of states (for example, the Visegrad group, Bulgaria/Romania in the Balkans, or the three Baltics) to limit destabilization.

Three variables will affect regional and sub-regional stability during expansion: the number of members admitted; timing admissions, either simultaneous or step-by-step; and, if step-by-step, the sequence. In other words, the order of admission may inadvertently undermine CEE stability. Simultaneously admitting the Visegrad members, for example, encourages and rewards multilateral sub-regional cooperation over competition. Multilateral cooperation is better than bilateral because of peer pressure in moderating cleavages. The inclusion of Slovakia (with Poland, Hungary, and the Czech Republic) is important because of its central location. Slovakia is the only Visegrad state to border on all others and is therefore crucial in developing the group as a strategically defensible bloc. The timing of admission should be simultaneous. Sequencing acceptance of those countries over a long period is likely to exacerbate differences and ethnic tension,[28] undermine cooperation, and alienate precisely those members who we most want to moderate.

Overall, U.S. bilateral and multilateral PFP policy should consciously encourage Visegrad sub-regional cooperation. It should guard against policies that inadvertently divide the group and turn them into competitors. Also, American policy should ensure that other Western institutions (such as EU and WEU) support these goals.

What if NATO decides to admit only Poland, Hungary, and the Czech Republic? Without Slovakia, geostrategic problems would emerge. First, this would result in Slovakia's alienation from the West; the Slovak-Czech border fault line would become a fissure, with reverberations to Ukraine. Second, assuming that Austria has not joined NATO, Hungary would not share a border with any NATO member and would become a NATO "island."[29] Third, because Hungary has Trianon treaty-related issues with three neighbors—namely, Vojvodina (Serbia), Romania, and Slovakia—ethnic divisiveness would be exacerbated. Since Bucharest and Bratislava would likely fear Budapest's future "blackball," sub-regional competition and tension could result.

And if NATO admits only Poland and the Czech Republic? While some might make a case for accepting them since they are ethnically homogenous and would address Germany's first line of eastern security, it would alienate Hungary and isolate Slovakia. Also, NATO would likely lose leverage in moderating ethnic issues among those states and Romania. Any sub-regional Visegrad cooperation would be destroyed and local competition heightened. And if NATO decides against expansion? The result could be sub-regional cooperation of a new kind. If PFP is unsuccessful in moderating the skepticism of CEE leaders, and their expectations for a "return to Europe" remain unfulfilled, PFP could be perceived as another Western "betrayal" of the region like those of 1938, 1948, 1956, and 1968. Western-oriented leaders would be undermined, thereby setting the stage for a return of post-communist or, even worse, right-wing nationalist leaders.

If EU trade barriers continue to have negative impact on the economies of CEE, and NATO increasingly becomes irrelevant to regional security interests, Western rejection and the fear of both Germany and Russia may lead to a new kind of cooperation. When Central and East Europeans think of a Europe without NATO, three alternatives come to mind: first, cooperating with Germany and France to form a triple alliance which would mean German dominance; second, maintaining Atlantic linkages by cooperating with America and Britain; and third, seeking entente with Russia and, in striking the best possible deal with Moscow, accepting "Finlandization with a human face."

The June 1994 NATO summit which approved PFP may prove to be a watershed. Despite its limitations, if PFP receives adequate resources and is implemented properly, it will reinvigorate the Alliance and foster a new European security architecture. But if PFP is not launched properly, it could well undermine European security and unravel NATO as well. **JFQ**

NOTES

[1] NATO Information Service, *London Declaration on a Transformed North Atlantic Alliance* (Brussels: NATO Information Service, July 5–6, 1990), articles 7 and 8.

[2] See Stephen F. Szabo, "Federal Republic of Germany: The *Bundeswehr*," in Jeffrey Simon, editor, *European Security Policy After the Revolutions of 1989* (Washington: National Defense University Press, 1991), pp. 189–206.

[3] "Statement issued by the North Atlantic Council meeting in Ministerial Session," Copenhagen, June 6–7, 1991, in *NATO Communiques 1991* (Brussels: NATO Office of Information and Press, 1992), pp. 22–23.

[4] North Atlantic Council statement, August 21, 1991, in *NATO Communiques 1991*, pp. 24–25.

[5] *Rome Declaration on Peace and Cooperation*, NATO press communique S–1(91) 86, November 8, 1991, article 11, pp. 4–5.

[6] For a thorough overview, see Stephen J. Flanagan, "NATO and Central and Eastern Europe: From Liaison to Security Partnership," *The Washington Quarterly*, vol. 15, no. 2 (Spring 1992).

[7] "Work Plan for Dialogue, Partnership and Cooperation," NATO press communique M–NACC–1 (92) 21, March 10, 1992.

[8] "Final communique issued by the North Atlantic Council in Ministerial Session," NATO press communique M–NAC–1 (92) 51, June 4, 1992, p. 4.

[9] "Statement issued at the North Atlantic Cooperation Council in Oslo, Norway," NATO press communique M–NACC–1 (92) 54, June 5, 1992, p. 2.

[10] "Final communique issued by the North Atlantic Council in Ministerial Session," NATO press communique M–NAC–2 (92) 106, December 17, 1992, p. 2.

[11] "Statement issued by the meeting of Defense Ministers," NATO press communique M–DMCP–1 (93) 28, March 29, 1993, p. 3.

[12] "Final communique issued by the North Atlantic Council in Ministerial Session," NATO press communique M–NAC–1 (93) 38, June 10, 1993, pp. 2–3.

[13] "Report to Ministers by the NACC Ad Hoc Group on Cooperation in Peacekeeping," NATO press release M–NACC–1 (93) 40, June 11, 1993, pp. 8–11.

[14] "Statement issued by the North Atlantic Cooperation Council in Ministerial Session," NATO press communique M–NACC–1 (93) 39, June 11, 1993, p. 1.

[15] "NACC High Level Seminar on Peacekeeping," NATO press release (93) 45, June 25, 1993.

[16] Jeffrey Simon, "Czechoslovakia's 'Velvet Divorce,' Visegrad Cohesion, and European Fault Lines," McNair paper 23 (Washington: National Defense University Press, October 1993).

[17] "Declaration of the Heads of State and Government issued by the North Atlantic Council in Brussels, Belgium," NATO press communique M–1 (94) 3, January 11, 1994, pp. 2–3; the declaration stressed development of separable but not separate capabilities.

[18] NATO's January 11, 1994 declaration noted that: "We expect and welcome NATO expansion that would reach democratic states to our east, as part of an evolutionary process, taking into account political and security developments in the whole of Europe." Ibid., p. 4.

[19] Ibid., p. 5.

[20] The deputy defense ministers and foreign ministers met in October 1990 to coordinate policy. In February 1991 Presidents Vaclav Havel and Lech Walesa and Prime Minister Jozsef Antall met in Visegrad, Hungary to determine forms of "triangle" cooperation.

[21] For a summary, see Joshua Spero, "The Budapest-Prague-Warsaw Triangle: Central European Security After the Visegrad Summit," *European Security*, vol. 1, no. 1 (Spring 1992), pp. 58–83.

[22] The Krakow declaration stressed association with EC as a priority and called for "the speediest conclusion of discussions about associate status in EC." See *European Security*, vol. 1, no. 1 (Spring 1992), pp. 104–08, for the text.

[23] The agreements were signed on December 16, 1991. Warsaw TVP, *FBIS–EEU–91–242* (December 17, 1991), p. 2. After the "velvet divorce" Czechs and Slovaks renegotiated the agreements on June 15, 1993.

[24] Communique, Budapest MTI, May 6, 1992. *FBIS–EEU–92–089* (May 7, 1992), p. 3.

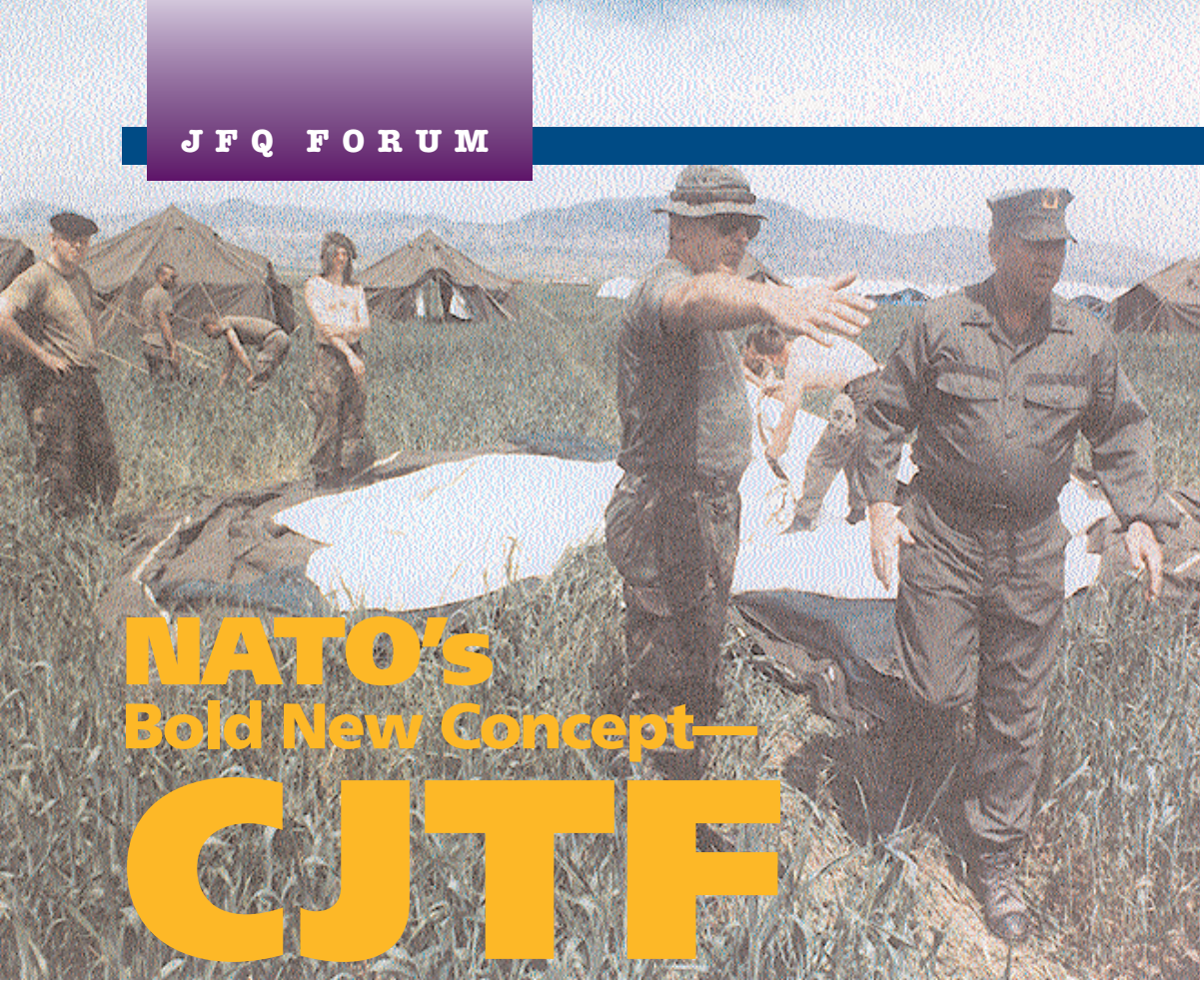
[25] For the full text of Yeltsin's secret letter on NATO expansion, see *Mlada Fronta Dnes* (Prague), December 2, 1993, p. 6.

[26] Henry Kissinger, "Be Realistic About Russia," *The Washington Post*, January 25, 1994, p. A19.

[27] William Odom notes that PFP (read *non-expansion*) "provides a vehicle for reactionary Russian leaders to cause trouble within NATO"; see *The Boston Globe*, January 11, 1994, p. 15.

[28] Ethnic tensions between Hungary and Romania would likely become more intense.

[29] This is a consequence of the January 1, 1993 division of the former Czechoslovakia.



NATO's Bold New Concept—CJTF

U.S. Navy (Milton R. Savage)

Dutch and American personnel assisting Kurdish refugees near Zakhu, Iraq.

By CHARLES L. BARRY

NATO is modifying its decades-old integrated military structure to create rapid deployment combined joint task forces (CJTFs). For Americans the task force concept is scarcely new—it was a staple of U.S. doctrine even before the Goldwater-Nichols DOD Reorganization Act directed that greater emphasis be given to joint and combined warfare. Other NATO members have also used the concept in such places as Zaire (1991), the Persian Gulf (1991), and Falklands (1982). In fact, NATO itself relied on joint and combined doctrine for collective defense throughout the Cold War.

Why is the CJTF initiative news? What is unique—unprecedented in military doctrine—is NATO's bid to incorporate the task force concept, which is traditionally used for ad hoc coalitions as a *modus operandi* of a standing alliance. NATO's forte has been robust, highly integrated but static military structures with a fixed mission. The task force concept is characteristic of short-term, quick-reaction contingency forces created and deployed for a specific crisis. If successful, the NATO CJTF will be a hybrid capability that combines the best attributes of both coalition and Alliance forces: rapid flexible crisis response and a trained, ready multinational force backed by an in-place infrastructure. CJTF will be a stand-by capability for conducting peacekeeping and peace-enforcement operations. It will be a multinational force, seasoned by regular exercises and trained in common procedures, ready to respond in time of crisis.

NATO's immediate peacetime missions have changed even though at its core it remains an alliance for collective defense. The two-hour reaction criteria for corps-sized formations to meet a Soviet attack and the layer cake static defense on Western Europe's borders are gone. NATO has responded to the *out-of-area or out-of-business* challenge to its existence with a determined reply that it will stay in business. For the Armed Forces some aspects of the CJTF concept will be familiar while others will not. Grafting a rapid response asset to the consensus-driven NATO Alliance will not be easy. It is one thing to develop concepts and doctrine for one nation and quite another to deploy the forces of 16 nations. Success depends upon innovative thinking and a serious commitment to adapt. As CJTF begins to acquire form and substance, it is worth examining the concept

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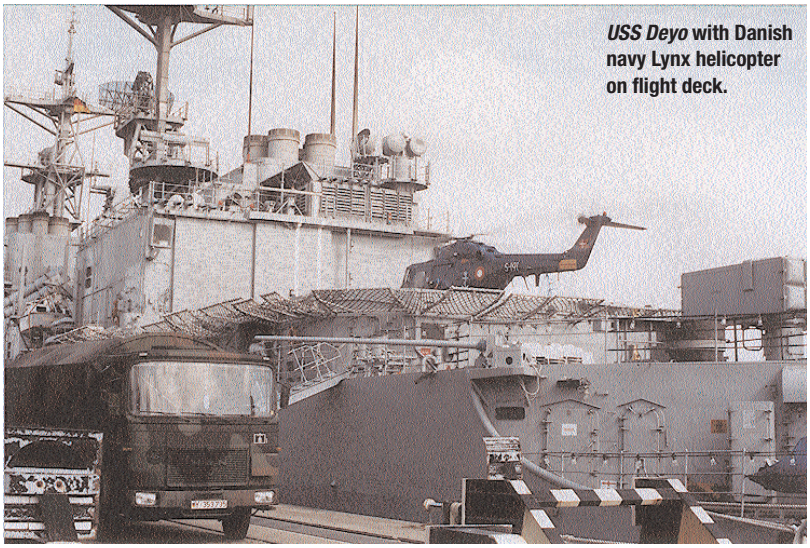


USS Deyo with Danish navy Lynx helicopter on flight deck.

U.S. Navy (Nathan Jones)

and its implications for U.S. doctrine, force structure, and operations planning.

NATO Adapts

CJTF is the latest in a series of NATO adaptations as the Alliance struggles to keep up with changes and remain relevant in a vastly different security environment. On balance, NATO has sustained admirable momentum in its commitment to transform. Broadly speaking, there are three main objectives in the fashioning of a new NATO. First, the Alliance is adjusting its structure to new missions and priorities. The most important mission is managing crisis. If NATO cannot do that it cannot meet the needs of its members. Crisis management calls for smaller multinational forces with the flexibility for contingencies over a wide geographical area. Second, the Alliance is extending security and stability beyond NATO's borders, especially to the new democracies of the East where crises are most likely to occur. Third, NATO has acceded to the wishes of its European members to develop a collective defense capability of their own known as the European Security and Defense Identity (ESDI). The CJTF concept addresses all three objectives.

NATO has already taken a number of steps since the end of the Cold War to further these objectives. Each step has been part of the evolutionary process essential to change in a consensus-driven institution. The nature of each action lays the foundation for further steps. As the January 1994 summit approached, forces and headquarters had been reduced, but the command structure and crisis management system remained essentially as designed for collective defense under article 5 of the North Atlantic Treaty. Meanwhile, planning for peace operations in Bosnia-Herzegovina already pointed to the need for readily deployable forces for out-of-area missions. Moreover, more progress was demanded on reaching out to the East and on ESDI.

In October 1993 the United States proposed the CJTF concept as a means of establishing a genuine European military capability that was "separable but not separate" from NATO's integrated military structure. At the same time, CJTFs serve the purpose of projecting security and stability to the East by giving NATO the flexible military structure to address tasks such as peace operations. NATO heads of state approved the CJTF initiative at their summit meeting in January 1994.[1]

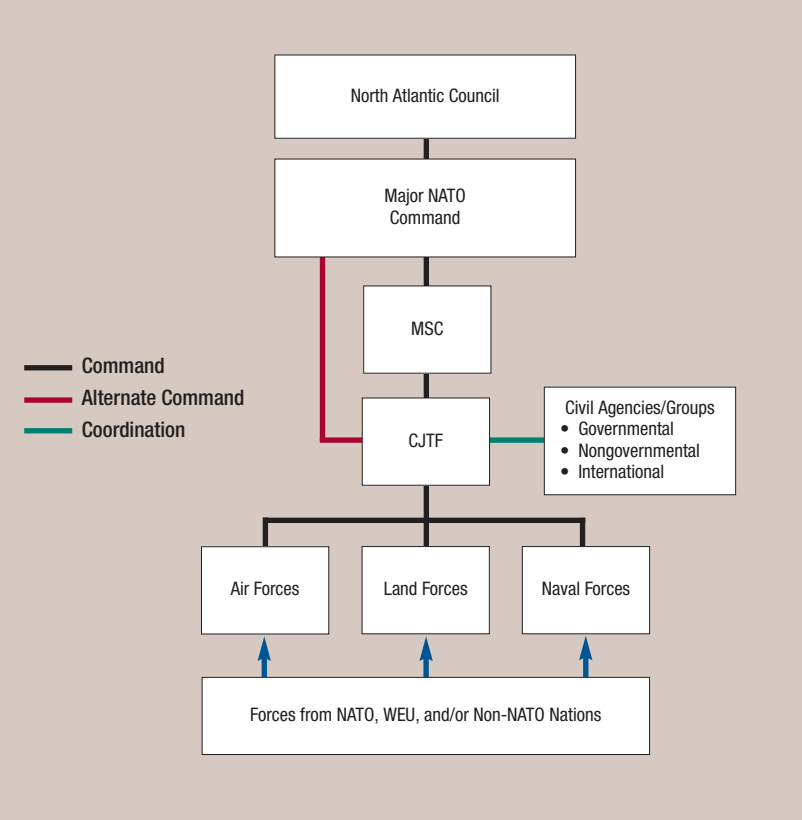
Defining CJTF

Joint doctrine describes a task force as a temporary force for carrying out a specific mission and as primarily operational (versus strategic or tactical) in nature. JTFs involve components from two or more services while combined task forces include forces from two or more nations.[2] Although U.S. doctrine does not define a CJTF per se, its character can be easily derived from these building blocks.

An immediate issue is to agree on definitions since an unambiguous lexicon is essential to a solid conceptual framework.[3] NATO has yet to arrive at a definition of CJTF. However, in light of the NATO summit language on CJTF and related U.S. doctrine, a CJTF can be described as a multinational, multiservice task force consisting of NATO and possibly non-NATO forces capable of rapid deployment to conduct limited duration peace operations beyond NATO's borders, under the control of the NATO military structure, the Western European Union (WEU), or even a coalition of states.

Since early 1994 work on CJTF has been progressing on three levels. First, at the Military Committee (MC) level and above, political aspects of definitions, terms of reference, and oversight are being resolved. Predictably, the resolution of such issues is

Command and Control Concept for NATO-Led CJTF



moving slowly as representatives of 16 nations seek agreement. Second, at the Major NATO Command (MNC) level, a tri-MNC working group under the executive agency of the Supreme Allied Commander Europe (SACEUR) has completed a draft operational concept for CJTF command and control (C^2).[4] The draft is now being considered by Allied military and political authorities. Meanwhile, Allied Command Europe (ACE) and Allied Command Atlantic (ACLANT) have begun to study procedures, training, and equipment requirements. The aim is to agree on a CJTF concept as soon as possible, and conceivably conduct an initial exercise evaluation in 1995. In meeting these objectives the development of a C^2 concept is the most pressing requirement.

CJTFs must be formed as separable—but not separate—parts of NATO's integrated military structure

The composition and designation of potential CJTF forces is the third level of work, but for practical reasons that process is less pressing. If a crisis erupts, forces can be cobbled together in ad hoc CJTFs, as illustrated by Desert Storm. Although not optimal and far short of the vision of what CJTF will provide, NATO members and other potential CJTF contributing states can provide suitable forces. Ultimately, CJTFs will offer a much greater opportunity for success than ad hoc coalitions.

Command and Control

The conceptual underpinnings of CJTF C^2 are few but important: first, it must support the three main objectives of the NATO transformation process outlined above; second, it must ensure that collective defense requirements can take priority if they arise; third, it must preserve both the transatlantic nature of the Alliance and the single integrated military structure; and finally, it must be done with minimum added cost. This means that CJTFs must be formed as separable—but not separate—parts of NATO's integrated military structure, and that they rely upon the resources of selected Major Subordinate Commands (MSCs).

Whatever C^2 concept is ultimately approved, it must provide for timely responses to crises beyond NATO borders, ensure smooth coordination between the Alliance and WEU, and be able to accommodate staff participation by non-NATO nations (especially Central and East European) both during pre-deployment planning and task force operations.

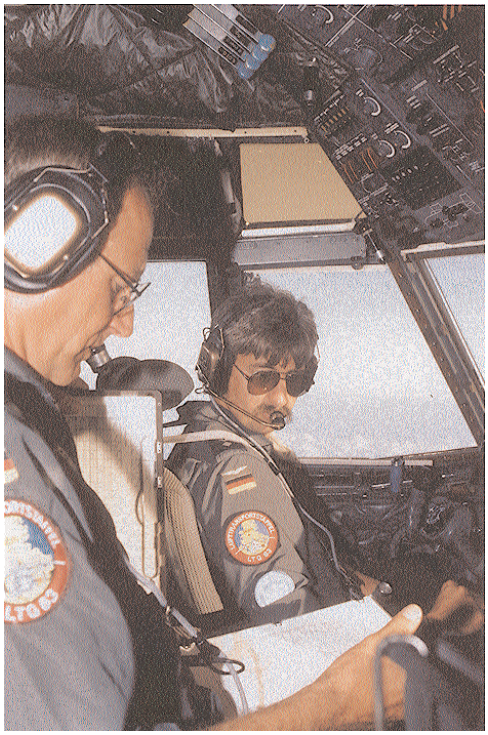
The functional requirements of CJTF headquarters include assimilating and disseminating intelligence; receiving and committing forces; and maintaining communications among subordinate, higher, and "lateral" elements such as humanitarian agencies, local civil authorities, or even other militaries. The conduct of logistical sustainment and the management and control of airspace are other tasks that must be designed into CJTF headquarters.

Present plans call for CJTF headquarters staffs to be created in selected ACE and ACLANT MSCs and built around the personnel and equipment tables of the host MSC. An MSC might also task subordinate commands to provide assets for CJTF headquarters and receive added resources from other MSCs. When not involved in operations, the designated CJTF commander, a

general or flag officer from the host MSC, will direct a small nucleus staff with responsibility for CJTF administration, operational planning, training, and exercises.

Which of NATO's eight MSCs will host a CJTF headquarters staff has not been decided. NATO must always consider more than just military factors in command arrangements. For both political and geographic reasons ACE may form a CJTF capability in all three of its MSCs: Allied Forces Northwest Europe (AFNORTHWEST), Allied Forces Central Europe (AFCENT), and Allied Forces Southern Europe (AFSOUTH). ACLANT might create only one or two CJTF headquarters under Striking Fleet Atlantic (STRIKEFLTLANT) or Eastern Atlantic (EASTLANT) commands. Both ACE and ACLANT will develop capabilities for any type of CJTF, consistent with the flexible intent of the concept: land-based, sea-based, or sea-based deploying ashore.

No response times have been agreed upon for deploying lead CJTF elements; but typically once a mission has received political approval an immediate military response is expected. Thus an initial deployment timeline, of probably less than one month, will be a factor in concept development. When alerted for either an exercise or actual contingency operation, CJTF headquarters will come up to full strength by drawing on the assets of the host MSC as well as other staffs. The CJTF headquarters primary staffs will have trained as a close working team and remain generally constant from one operation to the next. However, the actual headquarters size will be tailored to the size of the operation and the requirement for special staffs. A fully augmented CJTF could be quite large and provide C^2 for large multinational forces drawn from all services and many outside agencies. Conversely, a much smaller CJTF might be deployed to provide C^2 for a small contingent of only land and air forces.



U.S. Army (Charles Reger)

German crew performing takeoff check en route to El Bon drop zone in Somalia.

Task force lines of command must lead back to the MNC responsible for article 5 defense in the region concerned since a CJTF operation could escalate into a defense of Alliance territory or forces. For WEU-led CJTFs, procedures to recall a force to NATO control must be developed and exercised since, even for WEU states, territorial defense is considered to be, first and foremost, a mission for NATO. Once deployed, a CJTF could report either directly to a regional MNC or through an MSC, depending on the mission. One factor is whether the CJTF is land-based or sea-based. The benefits of an intervening headquarters generally increase for land-based operations while maritime forces tend to operate over greater distances without additional C^2 echelons.

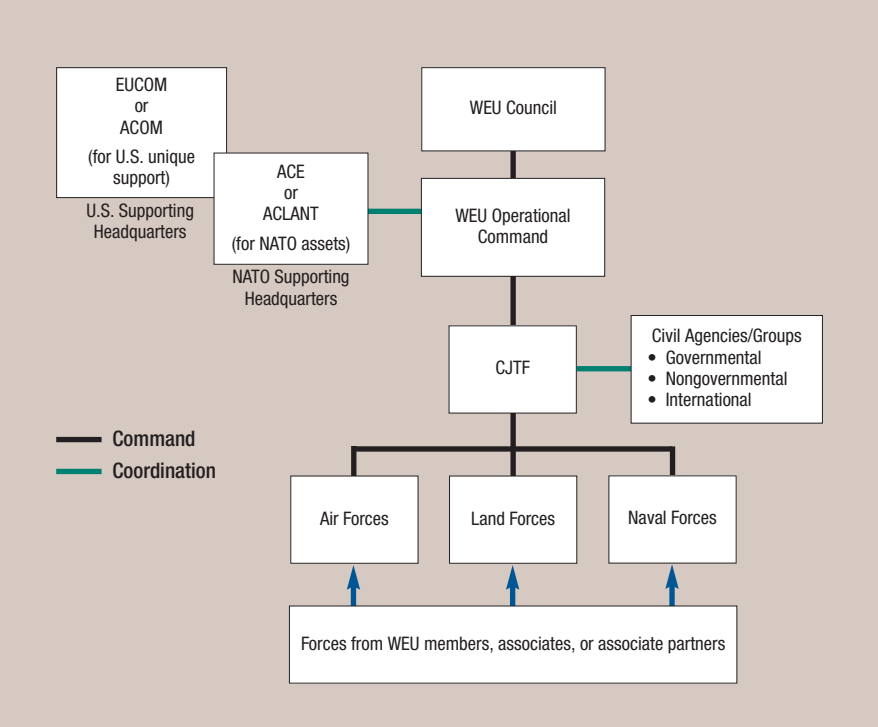
The CJTF will operate under agreed-on NATO standing operating procedures (SOPs) and standardization agreements (STANAGS). Non-NATO nations engaging in CJTF operations must be proficient in these procedures to successfully participate in contingencies. When a headquarters is activated national approval to allow all assigned personnel to deploy—irrespective of a nation's decision to contribute forces—will be needed to avoid degrading command and staff functions on the brink of deployment.[5] In addition to the NATO staff, non-NATO nations contributing forces to a CJTF will augment the headquarters with essential liaisons and staffs.

Since CJTFs can anticipate extended deployments, a personnel rotation plan will be needed for continuity in staff skills and operational tempo. As a point of reference, U.N. peacekeeping forces generally follow a six-month rotation plan. How long a CJTF must be prepared to operate remains unresolved. Historically, peace operations tend to endure, thus it is possible that a CJTF will have to operate (perhaps in a hostile environment) for extended periods.

CJTF Missions

An important consideration in developing the C^2 concept is the limited purpose of CJTF employment, that is, to conduct peace

Command and Control Concept for Western European Union-Led CJTF



operations outside the NATO area as defined in article 6 of the North Atlantic Treaty. Peace operations (so-called non-article 5 operations) are described in NATO's MC 327, "NATO Military Planning for Peace Support Operations," and include conflict prevention, peacekeeping, humanitarian aid, and peace enforcement. The missions of CJTFs will fall into those four categories. Supreme Headquarters Allied Powers Europe (SHAPE) has drafted separate military doctrine for peace operations, excluding peace enforcement which is regarded as being adequately addressed in existing NATO and national military doctrine.

if NATO members agree, a CJTF headquarters and support could be provided to WEU

The geographical areas in which NATO may agree to deploy a CJTF is first of all a political question, although military capabilities and limitations are important. In contemplating the area in which a CJTF may be deployed, it can be assumed that any mission will aim to protect an Alliance interest. Likely interests include preservation of peace in the lands and waters immediately adjacent to NATO territory. Such security interests might also extend to distant areas where conflict could threaten European security and stability.

Missions for a CJTF under WEU were outlined in the Petersberg Declaration and are akin to NATO's MC 327, and include humanitarian relief, rescue operations, and peacekeeping.[6] Also, an implied mission for CJTF planners is providing an increased reservoir of personnel experienced in crisis response. Many short warning missions such as noncombatant evacuation, disaster relief, and search and rescue, which may have to be executed by ad hoc coalition forces, should benefit from NATO's CJTF initiative and program training.

CJTFs under NATO

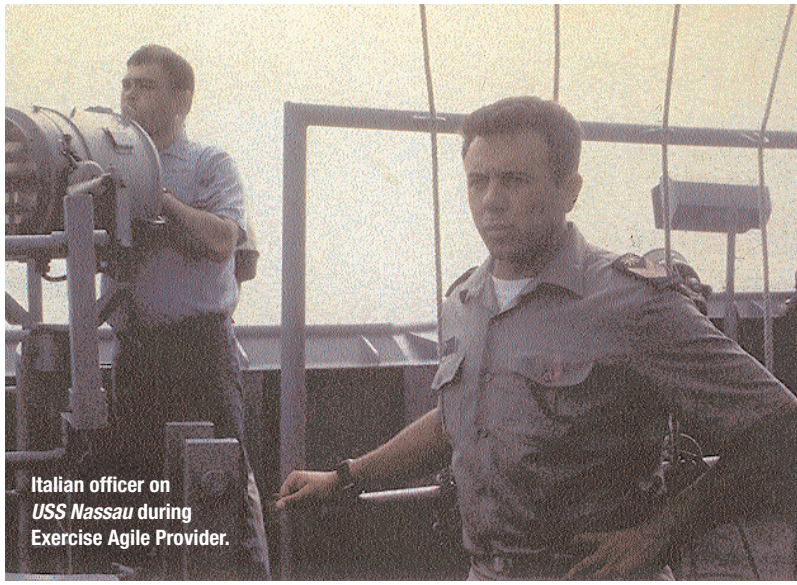
To make CJTFs adaptable to the inclusion of non-NATO forces as well as to employment under WEU, the tri-MNC planners considered three CJTF employment possibilities: a pure NATO CJTF, a NATO-plus CJTF that would include some non-NATO states, and a European-led/WEU CJTF. A CJTF headquarters could be deployed under any of these options, depending upon the political decision for employment and the nations involved.

A pure NATO CJTF could involve forces from up to 15 NATO members,[7] though even if NATO agrees to act some allies may not be willing or able to contribute forces. In some (perhaps most) scenarios the Alliance hopes to be joined by cooperation partner states, that is, those nations which have opted to join NATO's PFP program and have subsequently reached an agreement to provide forces for a NATO-plus version of CJTF. Theoretically, PFP is open to all 53 members of the Conference on Security and Cooperation in Europe (CSCE); practically speaking, however, many smaller states are incapable of CJTF participation.

If NATO members agree, a CJTF headquarters and support could be provided to WEU which plans to solicit force contributions from its members, associates, and partners, 23 nations in all. In this last option, NATO military elements would probably assume a support role.

Since CJTF forces must be ready on short notice, the forces which nations might offer to a CJTF are likely to be NATO reaction forces, particularly the ACE Rapid Reaction Corps (ARRC); the ARRC Multinational Division, Central (MND–C);[8] or Standing Naval Forces, Atlantic (STANAVFORLANT) and Mediterranean (STANAVFORMED).

CJTF-designated forces will have to be focused on peace operations and engage in significantly new training and exercise regimens. Some of the greatest challenges for NATO forces may come from strategic deployment and sustainment requirements. Units heretofore accustomed to a single mission close to fixed support bases will find themselves in scenarios more closely related to those of XVIII Airborne Corps.



U.S. Marine Corps Combat Camera (Jonathan Maness)

Italian officer on *USS Nassau* during Exercise Agile Provider.

NATO-Plus Contingencies

The potential for including forces of cooperation partner states in CJTFs is an important variation of the concept. Many scenarios suggest that crises will erupt in their geographic regions, and by themselves the cooperation partners have little hope of meeting demands of major crises. So planning, training, and exercising with NATO is an important prerequisite for participation in CJTFs.

The way in which cooperation partners will be exposed to NATO practices is through the other major initiative of the January 1994 summit, the Partnership for Peace (PFP). Under PFP's military cooperation program, partner militaries will be exposed to NATO procedures, standards, and schools, and participate in NATO exercises, especially for peacekeeping. In crises, skills honed under the PFP program can be used in CJTF operations, effectively extending the stabilizing role of NATO into the regions of partner states. Even if not actually called on to deploy, the planning and capability developed under PFP and CJTF exercises will lend a considerable sense of security to the partner states as military-to-military contacts deepen and the pool of personnel with NATO-partner experience grows.

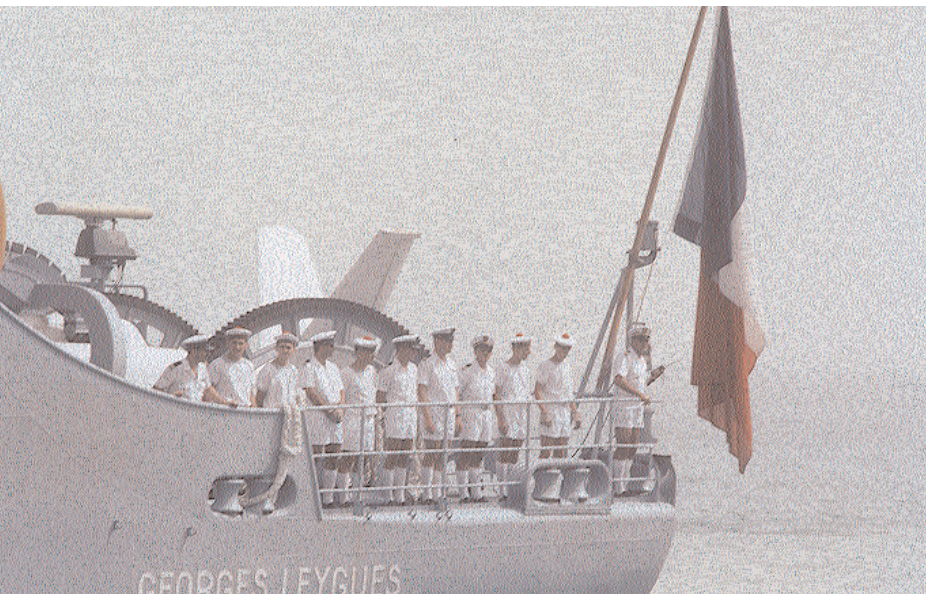
Initially there will be significant problems to overcome, especially language barriers (the official NATO languages are French and English, but the working language in the NATO military structure is English). There will also be doctrinal differences in all manner of military operations. In the short term equipment incompatibility will not be fatal because NATO has long managed a wide variety of different items in all its major and not-so-major lines. However, to succeed in fast-moving contingency operations NATO must revive standardization and interoperability, especially in command and control. Some logistics standards, such as those for fuel and ammunition, must also be given more priority. These concerns aside, the capability exists today to operate together in a crisis just as was done in Desert Storm.

WEU-Led Operations

The offer to provide CJTFs to WEU creates different operational challenges, particularly in command and control. NATO will provide a CJTF headquarters to WEU with the approval of the North Atlantic Council (NAC) on a case-by-case basis. WEU has recently provided NATO with a concept paper outlining operational requirements for a CJTF but has yet to participate with NATO officially on concept development. The lack of direct coordination notwithstanding, some observations can be made on how a CJTF might operate under WEU and what the challenges will be.

Once a decision is taken in NAC to provide a CJTF to WEU, NATO will choose a CJTF headquarters element from one of its MSCs and prepare it for deployment. During the stand-up process, the CJTF headquarters will be mission and force tailored. At an appropriate point, control of the CJTF will be transferred to WEU. Along with the CJTF headquarters, NATO will provide support assets to sustain it. The forces will likely come from WEU member states who maintain forces answerable to WEU (referred to as FAWEU).

the United States has agreed to support WEU operations with unique assets



U.S. Navy (April Hatton)

French destroyer *Georges Leygues* in Bahrain during Operation Southern Watch.

Besides contributions by 10 member states, forces may also be offered by the WEU's associate members or associate partners.[9] In addition, the United States has agreed to support WEU operations with unique assets.

The size of a WEU-controlled operation, and hence composition of the CJTF headquarters and forces deployed, is expected to be smaller than NATO-led operations. This is based on the assumption that if a crisis is large enough to concern all of the Allies (not just European members), NATO would direct the operation. Another factor is that, while WEU missions are basically the same as NATO's, WEU is only in the initial throes of adapting to a new role and lacks a permanent military C^2 structure.

In developing NATO WEU agreements on CJTF, a central issue is identifying the role of SACEUR or Supreme Allied Commander Atlantic (SACLANT). One view is that either SACEUR or SACLANT could be designated as the "supporting CINC" to the WEU operational commander for the provision of NATO resources as well as for whatever U.S. assets are provided. This view is an extension of U.S. doctrinal relationships and will have to stand the test of Alliance scrutiny, particularly on the political side. Another concern is the adequacy of the political-military structure directing a WEU-led CJTF operation. The union has no structure to parallel the NATO Military Committee, International Military Staff (IMS), or MNCs. WEU is studying this problem but will not create a duplicative structure. Instead, it may strengthen its operational headquarters or have the state providing the headquarters be the intermediary between the WEU Council and the CJTF commands.[10]

Logistical Support

CJTF logistical support will be one of the greatest challenges for an alliance that has known only interior lines of communication, fixed bases, and a wealth of host nation support. NATO's infrastructure, logistics planning, and support must meet rapid deployments, long and potentially unsecured lines of communication, and bare base operations. While NATO will likely adhere to its longstanding principle of national responsibility for supplies and services as the primary means for CJTF support, there will be unique transport and distribution requirements. Depending on the operational environment and the size of the task force, logistics coordination might be handled by either the headquarters logistics staff or, in more demanding situations, designation of a separate combined-joint logistics command.

There will also be special logistical needs for headquarters and support elements assigned directly from NATO. Providing supplies and services to these elements will be a responsibility of the logistics coordination staff or center. When a CJTF is chopped to WEU for a European-led operation, NATO's logistics concepts and infrastructure system

U.S. Marine Corps Combat Camera (R.W. Oliver)

French Foreign Legionnaire on Onslow Beach at Camp LeJeune.

will follow and provide the same standard of support as if the CJTF were NATO-led. A comprehensive CJTF concept will have to provide for self-sustainment, a concept not often considered by Alliance planners accustomed to the availability of extensive host nation support. In most crises such support will be unavailable, and in humanitarian aid operations the CJTF cannot rely upon the limited resources which might be available for the population in need of assistance.

Communications and Information

Another major challenge will be to create the necessary communications and information system architecture to support a radical new operational concept. A deployed CJTF headquarters must be able to communicate not only through traditional rearward, lateral, and forward military linkages, but with local governmental, nongovernmental, and international agencies. The absence of deployable long-range, multiple-user systems has been identified as a critical shortcoming.

Lack of interoperable systems is a second critical deficiency. Though the NATO Integrated Communications System (NICS) is sophisticated, it is essentially fixed-based and not deployable. Nor is NICS designed for connectivity with non-NATO forces (such as East European partners). Absent also are any operational level NATO–WEU links.

In the near- to mid-term at least CJTFs will be heavily dependent on the United States and other national assets for strategic and operational support in communications and intelligence. In this regard, satellites will be particularly helpful in extending existing NICS networks to deployed CJTFs, either afloat or ashore. Some Europeans have voiced the goal of eventually acquiring their own communications and intelligence capabilities, at least for WEU. Current levels of defense spending, however, militate against the quick replacement of these national capabilities.

Operational Capability

Like any new undertaking, CJTF is far from an operational reality. There are formidable hurdles to negotiate before the concept's minimum requirements are met. National doctrines on techniques such as transferring a sea-based headquarters ashore, defining the C^2 linkages between commands, or airspace control must be honed by the Alliance and adapted for multinational uses. One bright spot is the existence of numerous STANAGS, refined over forty years for collective defense operations, which will be a valuable reservoir for further cooperation and new procedures.

Other questions, such as the division of labor among MNC, MSC, and a CJTF during operations, the degree of interoperability of on-hand communications and intelligence, training and exercise requirements and their costs, and the need for a detailed assessment of deployments and movement requirements of a CJTF, are virgin territory for NATO military planners. Fortunately, NATO military staffs have already begun to tackle these issues.

A particularly important issue for NATO is the impact of nondeploying CJTF headquarters personnel should nations exercise their prerogatives not to provide personnel assigned to a CJTF headquarters. Answers to these questions will require a firm grasp not only of the aims of the CJTF initiative, but also the multinational political and military context in which solutions must be devised. Some issues will require more time to solve, among them the dearth of English-speaking commanders and staff officers in East European militaries. No doubt language will be a barrier to interoperability for some time to come. On the institutional side, a long-term investment will be needed to develop the

modalities of close WEU-NATO cooperation in crisis response. These two organizations are just beginning to establish the transparency and reciprocity necessary for effective coordination.

the call to dedicate resources to CJTF will run up against the recent tide of defense spending cuts

Regardless of the intent to avoid costs, some expense will be unavoidable, such as capital investment in CJTF-specific equipment, training and exercises, and operations and maintenance. The call to dedicate resources to CJTF will run up against the recent tide of defense spending cuts, which still has momentum.

Well begun is half done the old adage goes. CJTF project officers within NATO and WEU have achieved much in spite of slow progress on political issues. Member states know that unless NATO can solve crises that threaten their interests, the Alliance will wither and die even as security problems multiply. They also know that Central and East Europe—where most of the instability that could re-kindle threats along NATO's borders is found—must be drawn closer to NATO to achieve a permanent peace in Europe. They know, too, that the fledgling ESDI of the European Union needs room to develop. That will lead to a greater balance in the North American-European partnership which many hope will keep NATO strong. CJTF, more than any other initiative since the Cold War, offers hope that these objectives can be achieved.

It is no surprise that CJTF faces many challenges before becoming operational, particularly with regard to C^2, logistics, and communications. Nonetheless, both ACE and ACLANT have the capability to respond to crisis now. This is most evident in the detailed planning that has gone into peace operations in the former Yugoslavia. The final CJTF concept may, in fact, reflect much of what is being learned daily by AFSOUTH in Deny Flight and Sharp Guard. If and when NATO is called on to perform peacekeeping duty there, it will deploy essentially a NATO-led combined joint task force. What this portends for the future of the Alliance is a completely new NATO capability that addresses the security concerns of its members and partners while preserving the nature of the most successful alliance for security and defense in history. That's worth pursuing. **JFQ**

NOTES

[1] See NATO Declaration of Heads of State and Government at the North Atlantic Council meeting in Brussels, January 10–11, 1994, paragraph 9.

[2] See Joint Chiefs of Staff, *Dictionary of Military and Associated Terms,* JCS Pub 1 (Washington: Government Printing Office, 1987), pp. 76, 200–02, and 367; and Joint Chiefs of Staff, Joint Pub 3–0, *Doctrine for Joint Operations* (Washington: Government Printing Office, 1993), p. II–15.

[3] Competing definitions dog the broad doctrine of peace support operations, a NATO term which is identical to the U.S. term "peace operations." More confusion surrounds the category of "peacemaking," which in both U.N. and NATO parlance is a strictly diplomatic undertaking while WEU gives it the meaning that the United Nations and NATO reserve for "peace enforcement" which involves combat operations. The meaning of peace enforcement can also be misleading; the best examples are said to be the Korean and Gulf Wars.

[4] CJTF work was begun by NATO's three MNCs: ACE, ACLANT, and CINCHAN. But in July 1994 Allied Command Channel was phased out, leaving only Allied Command Europe and Allied Command Atlantic. Work continues in a bi-MNC working group.

[5] Nations with representatives assigned to CJTF headquarters staff positions will be asked to agree to deploying them even if they do not provide forces. However, the nature of a voluntary alliance is that deploying either forces and individual personnel remains a national prerogative.

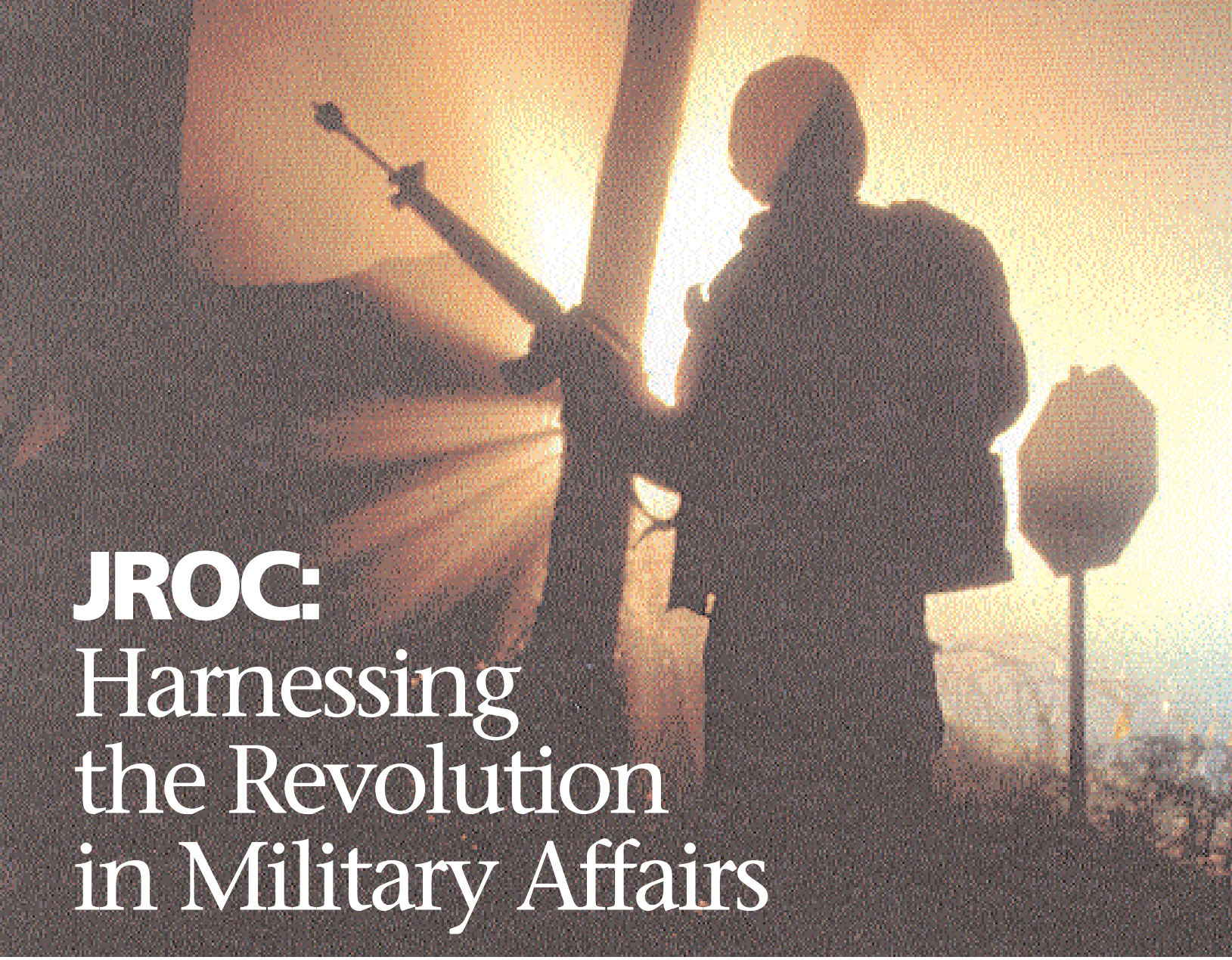
[6] The Petersberg Declaration (June 1992) implemented the Maastricht Declaration which sought to have WEU develop a defense identity for the European Union. In creating a military planning staff, the declaration assigned the task of contingency planning for these missions.

[7] The sixteenth nation, Iceland, has no military forces.

[8] MND–C is operational and currently includes Belgian, German, Dutch, and British forces.

[9] In addition to ten members, there are two associate members and nine associate partners. For a list of WEU member countries see the chart on pp. 40–41 of this issue of *JFQ*.

[10] WEU C^2 at the operational level is ad hoc, with political authorities designating an operational commander/headquarters and a force commander, usually based upon national contributions; see WEU CM (93) 7, "Organization and Operation of WEU in Time of Crisis".



JROC: Harnessing the Revolution in Military Affairs

Combat Camera Imagery (Mark A. Borosch)

By WILLIAM A. OWENS

Today's military leadership is charged with three broad and interrelated missions. One is the successful stewardship of a capable military. We must maintain a ready force with superior warfighting capabilities as force structure and budgets get smaller and, because of changes in the world, as operational demands evolve. This latter dynamic is closely linked to a second mission: vigorous engagement. Since America is a world power committed to democratic engagement and enlargement, the Armed Forces will continue to contribute to U.S. policies through their presence, and thus must be prepared to conduct a range of operations from peacekeeping and peacemaking to major combat. Finally, the military is charged with assisting the President and the Secretary of Defense in building future capabilities, particularly in developing what is known as *leading edge warfare*.

These missions are both challenging and dynamic. Each requires dealing with revolutions. Changes in the international system and the demise of a bipolar world are clearly revolutionary, demanding a constant review of what is meant by vigorous engagement in an uncertain world. But our stewardship of

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Joint Warfighting Capability Assessments

Participants / Sponsors	Joint Staff	Services	OSD	CINCs	Defense Agencies	Others
J-8	Strike					
J-8	Ground Maneuver					
J-4	Strategic Mobility and its Protection					
J-7	Air Superiority					
J-5	Deter/Counterproliferation of WMD					
J-6/J-3	Command and Control and Information Warfare					
J-2	Intelligence, Surveillance, and Reconnaissance					
J-5	Overseas Presence					
J-3/J-1	Joint Readiness					

the Armed Forces also faces another revolution. We must manage the largest decline in military resources since World War II as we maintain the flexibility to meet the demands of vigorous engagement. And building the force of the future requires harnessing the revolution in military affairs (RMA) brought about by technological leaps in surveillance, command and control, and longer range precision guided munitions.

In some ways this is our most challenging mission. We have a good notion, based upon extensive experience, of what stewardship of a capable military means. Having been vigorously engaged in world affairs for decades, we have a sense of what the Armed Forces can and can't do in support of U.S. policy. Building a military for the future—while meeting the demands of two other basic missions—is different. We have planned for almost half a century to cope with a world that no longer exists and are accustomed to taking our cues from the threat posed by another superpower. Now, planning processes adopted to deal with that threat are not sufficient to shape the joint military power which the future may require. It is here, in extending America's leading edge of military capabilities, that past experience may be the least helpful and the need to alter the old ways of doing things may be the greatest.

JROC has emerged as a principal forum in which senior military leaders address requirements from a joint perspective

Building a joint military capability to harness the RMA will not be easy. History reveals a tendency for the services to diverge rather than coalesce during periods of relative fiscal austerity. That is, each service tends to put planning priority on assuring and protecting core competencies at the expense of those capabilities that support and facilitate operations of the other services. It is easier to be joint in word and deed in times of fiscal largess; parochialism is stronger when budgets draw down. The Nation cannot afford and will not benefit from adhering to this traditional pattern.

Among other duties, the Goldwater-Nichols Department of Defense Reorganization Act of 1986 made the Chairman of the Joint Chiefs of Staff (CJCS) and Vice Chairman of the Joint Chiefs of Staff (VCJCS) advocates for a joint military perspective. To accomplish this task the law calls on VCJCS to chair a special council on military requirements—the Joint Requirements Oversight Council (JROC)—and CJCS to submit alternative program recommendations and budget proposals to the Secretary of Defense. JROC has emerged as a principal forum in which senior military leaders (VCJCS and the service vice chiefs) address requirements from a joint perspective. These are then taken to CJCS for review and approval. The document in which CJCS alternatives to service POMs are presented is known as the Chairman's Program Assessment (CPA).

Until recently JROC and CPA have not been closely associated. JROC, focusing on initial stages of the acquisition process, has not been seen as an integral part of the programming process, and neither JROC nor CPA have been exercised with the full authority vested in CJCS and VCJCS by Goldwater-Nichols. Now when it is critical that the synergism of a joint approach move to the fore in military planning and programming, the legal authority exists. Indeed, the law requires it.

Current changes in the process revolve largely around JROC and CPA. Briefly, we have expanded the scope and significance of JROC discussions and linked them to CPA which, in turn, will fulfill its congressionally mandated destiny to articulate the joint, collective position of the services with respect to joint requirements and readiness. This is an important evolution insofar as the overall process

inside the Pentagon is concerned since it can provide the Secretary of Defense with a single, authoritative military view of key issues, rather than what has often happened in the past: no consolidated joint military view was articulated, or on occasion a cacophony of different and competing views emerged.

Moving JROC into a more central position required major changes in staffing and analytical support. We have created nine assessment areas, charged separate elements of the Joint Staff with coordinating each assessment, and invited participation from a wide range of agencies and research organizations in each assessment. As the accompanying diagram suggests, we see the assessment process in terms of a matrix and have set it up to achieve things that matrix organizations facilitate. Matrices compel interaction across organizations; they engage people who do not normally talk to each other and enhance a horizontal flow of ideas. When this happens new insights, innovation, and intellectual synergy often spark conceptual breakthroughs and leaps in problem-solving.

The assessment process will support the expanded JROC in two ways. It will address the issues that are of particular importance to JROC, responding to its guidance and initiative. But the process will also act as an innovation engine, seeking to discover and propose to JROC the ways in which the capabilities of the various services can be integrated to provide more joint, synergistic solutions to military problems.

JROC with the CINCs constitutes a repository of profound military insight and experience

One primary result of this interaction between the assessment process and JROC is the formulation of a draft CPA. JROC, largely through the assessment process, helped CJCS formulate recommendations for the Secretary of Defense on obtaining better joint warfighting capabilities for the FY96–FY01 defense program than could be found in the sum of service POMs. The CPA, or "Chairman's Program," represents the corporate advice of the Nation's military leaders (as distinguished from a compilation of programs advanced by each service). It was discussed in detail by JROC members and the CINCs; the JROC boarded an aircraft, flew to unified commands, and there engaged in systematic, in-depth discussions with CINCs and their staffs. While this step was supported by extensive contact between the Joint Staff and the staffs of the CINCs during the assessment process, its essence was face-to-face exchanges at the four-star level.

The results of this process—including any adjustments in the draft CPA—went to CJCS in early September. CJCS then forwarded the CPA to the Secretary of Defense for consideration in program and budget decisions. This sequence will become a normal part of PPBS. (The next step will be completed in February/March 1995 to influence service POMs for the FY 97 defense proposal.) The assessment process and operation of JROC will be a *continuous* undertaking—not a one-time effort.

The changes implied in expanding JROC are significant. JROC will not be simply another military committee in which the members participate strictly as representatives of their services, making decisions and recommendations that reflect the lowest common denominator or sum of service requirements. The JROC members cannot, of course, be expected to divorce themselves entirely from service positions. Yet collectively, JROC with the CINCs constitutes a repository of profound military insight and experience, and the rank of its members permits JROC to act as a corporate body, capable of developing consensus views that transcend individual service perspectives.

Articulating this joint perspective at the upper levels of military leadership has the potential of bringing about change in a new era. It is a fundamental part of our response to the revolution in military affairs that confronts us today. **JFQ**

JOINT FORCE QUARTERLY

Essay Contest on the Revolution in Military Affairs

There is considerable speculation that we may be entering a signal period in military affairs—one in which a major transition between regimes of warfare will occur. A similar transition took place in the 1920s and 30s when the development of doctrine for land, sea, and air warfare resulted in profound changes in how wars are fought. The militaries which were unable to accurately interpret the changes invested unwisely in weaponry and equipment, and in some cases sustained catastrophic losses on the battlefield.

Dramatic technological changes that have been underway since World War II could lead to another revolution in warfare in the coming decades. Indeed, the stunning victory of coalition forces in the Persian Gulf War offered a glimpse of the military potential that the technologies of this emerging revolution might hold. As in the interwar years, the key to achieving the next revolution in military affairs (RMA) will not be found in technology itself, but rather in the adoption of new operational concepts and organizations that fully exploit technologies. Being the first and best at the intellectual task of articulating these concepts may be critical to the future success of the American military.

The RMA Essay Contest

To encourage innovative thinking on how the Armed Forces can remain at the forefront in the conduct of war, *JFQ* is pleased to announce the first annual "Essay Contest on the Revolution in Military Affairs" sponsored by the National Defense University Foundation, Inc.

The contest solicits innovative concepts for operational doctrine and organizations by which the Armed Forces can exploit existing and emerging technologies. Essays that most rigorously address one or more of the following questions will be considered for a cash award:

- The essence of an RMA is found in the magnitude of change compared with preexisting warfighting capabilities. How might emerging technologies—and the integration of such technologies—result in a *revolution* in conducting warfare in the coming decades? What will be the key measures of that change?
- Exploiting new and emerging technologies is dependent on the development of innovative operational concepts and organizational structures. What specific doctrinal concepts and organizations will be required to fully realize the revolutionary potential of critical military technologies?
- How might an adversary use emerging technologies in innovative ways to gain significant military leverage against U.S. systems and doctrine?

Entrants can learn more about thinking on RMA from the following articles which have appeared in the literature: Paul Bracken, "The Military After Next," *The Washington Quarterly*, vol. 16, no. 4 (Autumn 1993); Antulio J. Echevarria and John M. Shaw, "The New Military Revolution: Post-Industrial Change," *Parameters*, vol. 22, no. 4 (Winter 1992–93); James R. FitzSimonds and Jan M. van Tol, "Revolutions in Military Affairs," *Joint Force Quarterly*, no. 4 (Spring 1994); and Vladimir I. Slipchenko, "A Russian Analysis of Warfare Leading to the Sixth Generation," *Field Artillery* (October 1993).

Contest Prizes

Winners will be awarded prizes of $2,000, $1,000, and $500 for the three best essays. In addition, a special prize of $500 will be awarded for the best essay submitted by either an officer candidate or a commissioned officer in the rank of major/lieutenant commander or below (or equivalent grades). A selection of academic and scholarly books dealing with various aspects of military affairs and innovation will also be presented to each winner.

CONTEST RULES

1. Entrants may be military personnel or civilians (from the public or the private sector) and of any nationality. Essays written by individual authors or groups of authors are eligible.

2. Entries must be original and not previously published (nor under consideration for publication elsewhere). Essays that originate from work carried out at intermediate and senior colleges (staff and war colleges), service schools, and other academic institutions are eligible.

3. Entries must not exceed 5,000 words in length and must be submitted typewritten, double-spaced, and in triplicate. They should include a word-count at the end. Documentation may follow any standard academic form of citation, but endnotes rather than footnotes are preferred.

4. Entries must be submitted with (1) a letter clearly indicating that the essay is a contest entry together with the author's name, social security account number (or passport number in the case of non-U.S. entrants), mailing address, telephone number, and FAX number (if available); (2) a cover sheet containing the contestant's full name and essay title; (3) a summary of the essay which is no more than 200 words; and (4) a brief biographical sketch of the author.

5. Entries must be mailed to the following address (facsimile copies will not be accepted): RMA Essay Contest, *Joint Force Quarterly*, ATTN: NDU–NSS–JFQ, Washington, D.C. 20319–6000.

6. Entries must be postmarked no later than August 31, 1995 to be considered in the 1994–95 contest.

7. *JFQ* will hold first rights to the publication of all entries. The prize-winning as well as other essays entered may be published in *JFQ*.

8. Winners' names will appear in *JFQ* and the prizes will be presented by the President of the National Defense University at an appropriate ceremony in Washington, D.C.

F–14 Tomcat landing on *USS Independence* during Operation Southern Watch.

U.S. Navy (Mark Therien)

NATO Airborne Early Warning Aircraft.

U.S. Air Force (Gary Coppage)

Unity of Control

Joint Air Operations in the Gulf—Part Two

By MICHAEL A. NELSON *and* DOUGLAS J. KATZ

Summary

Today U.S. Central Command is working toward better control of joint air operations, a concern that was raised by James Winnefeld and Dana Johnson in an article ("Unity of Control: Joint Air Operations in the Gulf") which appeared in the inaugural issue of *JFQ*. Taking advantage of one of the two longest standing joint task forces, a "cadre joint air staff" is in training—a cadre that can be rapidly expanded in a contingency. Joint Task Force-Southwest Asia is demonstrating through its efforts how to establish and conduct operations in any joint task force. The lesson is to build on the mission, the unique capabilities of each service, and the many skills brought to a joint staff by the personnel who represent the various participants. Unity of control has arrived.

The inaugural issue of *Joint Force Quarterly* contained an article by James Winnefeld and Dana Johnson on unity of control in air operations in the Persian Gulf War. The authors advanced two initiatives to promote success: ongoing detailed planning and training for large-scale operations and preparing a cadre joint air staff to be quickly expanded in a conflict. While their first initiative has been accepted and is being institutionalized through joint doctrine, the second has not been adequately addressed. Much attention has been given to joint air operations since Desert Storm. Exercises have been conducted at all levels within the

services and unified commands to implement joint doctrine for air operations and to orient staffs on the emerging concept. The exercises have been relatively brief and invariably involved new procedures and doctrine on each occasion. No matter how well planned, they have achieved only limited success in building a trained cadre staff.

Southwest Asia

There is an operation in southwest Asia which trains multiple service and command staff personnel for air operations as part of long-standing joint combat operations. Joint Task Force Southwest Asia (JTF–SWA) was formed in August 1992 to conduct Operation Southern Watch in accordance with U.N. Security Council resolutions 687 and 688. JTF–SWA is often associated with enforcing the no-fly zone below the 32d parallel in Iraq under resolution 688 which calls for the fair treatment of Iraqi minorities, including Shias in the marshes, and a no-fly zone to monitor Iraq's compliance. But equally significant has been resolution 687 with its provisions on weapons of mass destruction, where JTF–SWA planned and, if directed, would conduct a campaign against Iraqi targets as a means of compelling compliance.

exercises have achieved only limited success in building a trained cadre staff

Given the preponderance of Air Force assets, and with a command and control structure in place in the region, Central Command Air Forces (CENTAF) was tasked to command, staff, and start-up JTF operations. Further, recognizing the unique availability and nearly equal tactical force level, Navy Central Command (NAVCENT) was tasked to provide a deputy commander plus key staff members. Ultimately the staff reached a strength of about 200, comprised predominantly of Air Force personnel, but with Army and Navy as well as Royal Air Force (RAF) and French air force members in planning and executive positions. The assets provided to the JTF commander consist of a large Air Force composite wing, an almost continuous carrier air wing and air defense-capable Navy cruisers, Army Patriot missile batteries, detachments from the RAF and French air force, and Tomahawk-capable ships. This makes JTF–SWA a model for joint and combined operations.

Working with the Commander in Chief, U.S. Central Command (CINCCENT) and the NAVCENT commander, the CENTAF commander formed a headquarters with a classic operations structure—J-1 to J-6, less J-5—including a J-3 staff almost identical to that of the Joint Forces Air Component Commander (JFACC) in Desert Storm, a difference being size (the JTF–SWA staff has about 200 people versus JFACC which had over 1,000 in 1991). This was done to allow a rapid expansion for continuous combat operations and allow long-term operations with an accepted structure. At the same time, and more importantly, JFACC duties and procedures used in the Gulf War were also reinstituted, namely, a single Air Tasking Order (ATO) for every flying operation, a single Airspace Control Order (ACO), responsibility for Area Air Defense, operation of a Joint Rescue Control Center, responsibility as interdiction coordinator, and ATO execution.

Within the JTF staff, the two major directorates for conducting Southern Watch are J-2 and J-3. In addition to being the largest, J-2 and J-3 are jointly staffed. The J-2 director is an Air Force colonel and the deputy a Navy captain. Five to eight other Navy personnel work in J-2 functional areas. The chief of collection management is an RAF officer and the ground analysis cell is made up of a British army major and three U.S. Army NCOs. Integrated in the Joint Intelligence Center (JIC) are support teams from national intelligence agencies. A continuous intelligence watch offers excellent interplay among the services with functional teams providing analysis to the commander on Iraqi operations and political activities. J–3 has the greatest combination of assigned personnel and is the largest part of the staff. Of the 65 assigned or attached personnel, 10 are from the Navy, including a captain as deputy. The Navy also furnishes members of long range plans (LRP) staff, today's equivalent of the Black Hole,

Lieutenant General Michael A. Nelson, USAF, is commander, 9th Air Force and U.S. Central Command Air Forces; he previously served as Deputy Chief of Staff, Plans and Operations, at Headquarters, U.S. Air Force. Vice Admiral Douglas J. Katz, USN, has twice commanded the *USS America* Battle Group in the Persian Gulf, the first deployment during Operation Desert Storm.

F–15 taxiing into its slot.

U.S. Air Force (Steve M. Martin)

JTF–SWA Significant Events

August 27, 1992: First sortie flown.

December 27, 1992: MiG–25 downed by F–16.

December 1992–January 1993: Iraq positions surface-to-air missiles below 32d parallel.

January 13, 1993: Coalition air attack against surface-to-air missiles.

January 17, 1993: Tomahawk strike on nuclear facility.

January 18, 1993: Air strikes against surface-to-air missiles.

April 18, 1993: F–4G fires HARM at anti-aircraft radar.

June 26, 1993: Tomahawk retaliatory strike against intelligence headquarters.

June 29, 1993: F–4G fires HARM at anti-aircraft radar.

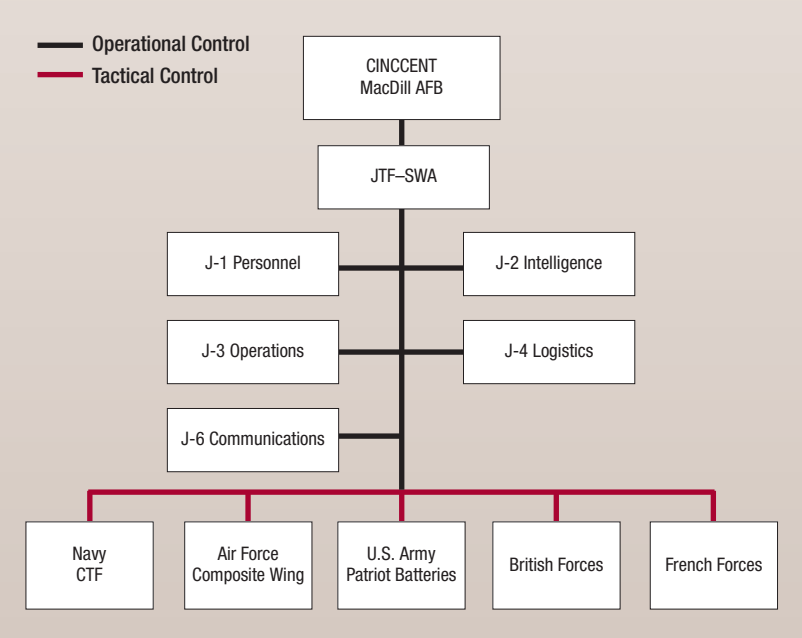
July 24–29, 1993: F–4G/EA–6Bs fire HARMs at anti-aircraft radar.

and the guidance, apportionment, and targeting (GAT) staff.

With everyone in desert camouflage uniforms, it is often difficult to distinguish whether the GAT briefer is an Army or Navy officer. Indeed they are interchangeable after one week in GAT. Other contributions include four Army personnel for the air defense cell and representatives from the RAF and French air force. The balance of J-3 is comprised of Air Force personnel, including a colonel who is the director. Because both CENTAF and NAVCENT as component commands have responsibility for their respective forces, J-1 and J-4 support the JTF–SWA staff and also assist the services in monitoring personnel and logistics. J-6 has a small staff which depends on Navy and Air Force personnel to support communications equipment in the AOR. J-1, J-4, and J-6 are all staffed by Air Force personnel.

The entire JTF staff, including the commander (an Air Force major general) and the deputy (a Navy rear admiral, lower half), serve on 90-day tours. By the end of 1993, over a thousand personnel had gained joint experience on the JTF–SWA staff under this assignment policy. Among that number is a total force mix which includes members of the Air National Guard and Reserve as well as active duty leaders who subsequently had significant operational tours. Within the Navy three carrier battle group commanders have been deputy JTF commanders. The Air Force has sent its best operationally-oriented major generals and colonels. For example, the commanders of both the Air Warfare Center at Eglin Air Force Base and the Weapons and

JTF–SWA Structure



Tactics Center at Nellis Air Force Base have recently commanded JTF–SWA.

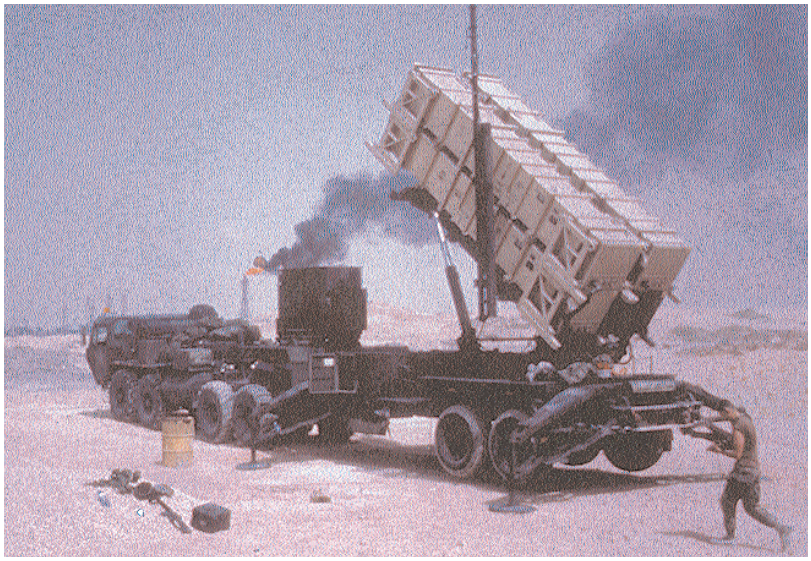
No-Fly Zone

A true measure of success is relevance to the real world. JTF–SWA has been enforcing the Southern No-Fly Zone and conducted strikes in 1993 while executing a strong exercise program that routinely prepares joint and combined forces for combat operations. This success is due to the leadership of CINCCENT, his principal component commanders, and daily cooperation among the component staffs. However, because of its austere size and continuous turnover, the JTF depends on CENTAF and NAVCENT staffs to resolve numerous issues and provide continuity to ongoing operations. For example, NAVCENT strike cell serves as executive agent for Tomahawk cruise missile planning, including maintaining target data bases and concept of employment. In addition, JTF J-2 and NAVCENT N-2 work very closely to maximize intelligence support from collection resources in theater.

J-2 draws intelligence from all sources, including Air Force RC–135s, to develop a fused picture of the situation. Daily watch-to-watch coordination allows complementary analysis and reporting from a full range of expertise. The N-2 staff relies on J-2 for in-depth Iraqi air and air defense analysis which, in turn, is drawn from various sources including CENTAF A-2, while J-2 uses N-2 Iranian air and Arabian Gulf maritime analysis. Other major agencies and assets provide liaison officers with mission expertise as well as direct links to specialized services which respond to mission tasking. These capabilities facilitate an exchange of critical ideas that ultimately enhance the warfighting expertise of the entire JTF staff.

Together with these formal arrangements, informal staff relationships maintain continuity in JTF operations while training junior officers. The composite air wing and carrier air wing—major suppliers of combat assets—also provide JTF duty officers with a knowledge of tactical systems, unit preferences, and manpower for surge operations. At the same time these captains/lieutenants and majors/lieutenant commanders learn how JTFs operate, ATOs are built, and individual services contribute to a joint effort. The information that they take back to their respective units contributes to jointness. Furthermore, at all levels, especially in the GAT division, there are daily discussions on the scope and scale of operations, including carrier port visits, unit rotation, training, special exercises, and even holidays. The period under discussion routinely covers a 60-day period up to 48 hours prior to publishing an ATO for a given day. Not only is the commander's guidance met through this informal process, but adequate time is available to approve changes as units maintain full combat capability. This process is another of the practical lessons learned from the operation, especially given the thousands of personnel who have supported Southern Watch. Finally, daily exchanges among the JTF commander, his deputy, and the staff provide additional, albeit indirect, training of everyone involved in the operation.

While acknowledging that JTF–SWA is in fact building a cadre joint air staff, one might ask what is being taught. First, every service and all personnel must accomplish a single mission. The JTF commander and staff use the best assets given the tasks, capabilities, and political constraints. Second, since people make an organization, the services must assign their "best and brightest" to this difficult temporary duty task. An excellent



U.S. Army (Robert Reeve)

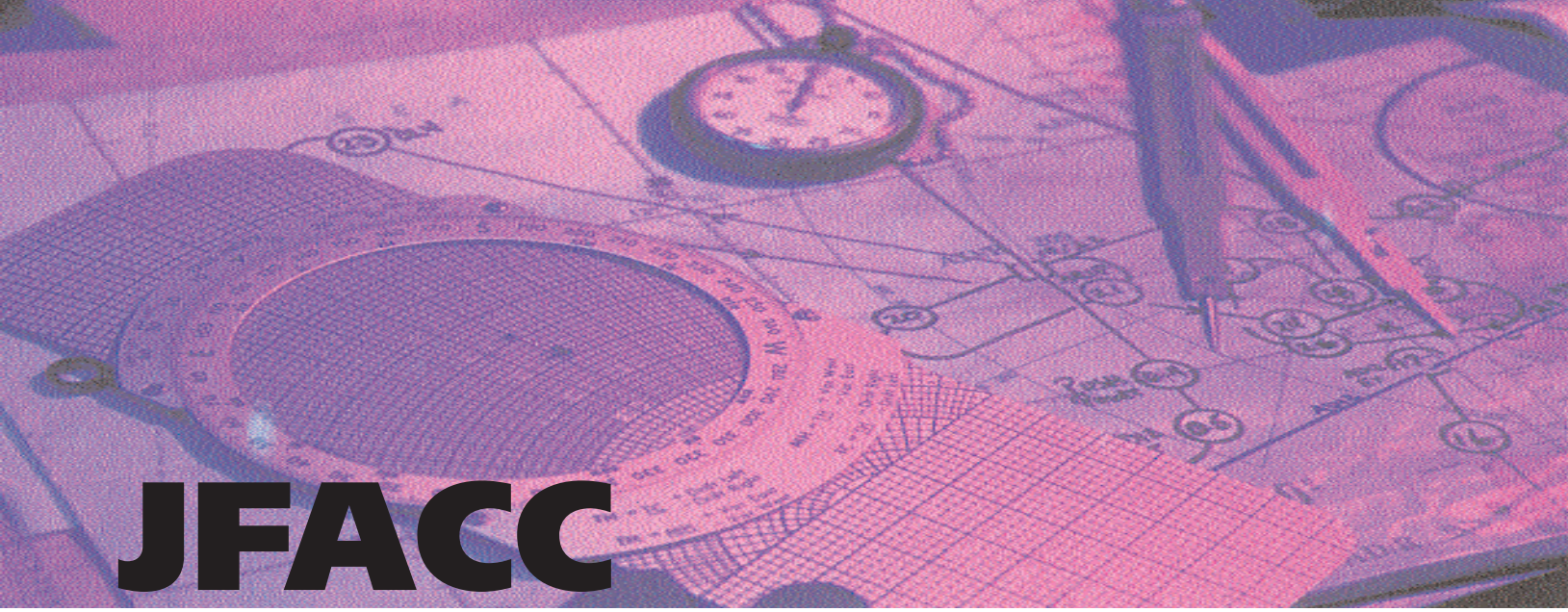
Patriot in firing position.

example is the Navy's selection of the deputy J-3. For the first five rotations the Navy almost always assigned newly identified vice carrier air wing commanders to the position who subsequently returned to their wings and deployed to the Arabian Gulf within six months. Each of these officers had a unique opportunity to come to understand the JTF mission and provide critical information to their wing commander, ship's captain, and carrier group commander. The Navy is reaping dividends from this assignment policy. JTF staff officers experience first-hand the need to blend specific service strengths to achieve a mission. In Southern Watch, for instance, the Air Force has larger airborne warning and control system (AWACS) and tanker assets, while the Navy has more high-speed antiradiation missile (HARM) and Suppression of Enemy Air Defenses (SEAD) assets. The capabilities of both services are needed to accomplish the mission and neither could go it alone in a large scale or surge operation. Such a balancing of service strengths is a major benefit of joint operations and a valuable lesson for future leaders.

the services must assign their "best and brightest" to this difficult temporary duty task

Two areas in which JTF–SWA could be improved are generally apparent to those involved. First, while the United States and its coalition partners have greatly enhanced their communications (ATOs are no longer hand carried to outlying bases or ships at sea), the system is not yet seamless for all the players. Part of the problem is in the long-term, temporary nature of the operation, and another is the catch-up work which has gone on since 1986. J-6 and its service counterparts daily learn more about the issue and develop ways to make the systems work better. Another part of the communications problem is the distance between southwest Asia and the United States, something faced by operations conducted throughout the world (that is, there are finite assets and bandwidths for use in each AOR). Second, all forces involved in JTF–SWA must assign quality people. There is a great temptation to reduce the level of expertise sent to one of several competing operations but the services must remain committed to assigning the best to ensure readiness for joint operations.

The success of JTF–SWA and Operation Southern Watch can be measured in various ways aside from daily enforcement of the no-fly zone. When Iraq did threaten coalition forces in the no-fly zone an Air Force F–16 shot down a MiG. When called on to execute a strike, positive action was taken by air forces tasked by JTF. Finally, two highly successful Tomahawk Land Attack Missile (TLAM) strikes demonstrated the depth of the coalition's resolve in ensuring that Iraq lives by the terms of U.N. disarmament agreements. Each day JTF elements vigilantly and steadfastly continue to enforce the no-fly zone. There is every reason to believe that this success will continue for as long as JTF–SWA remains active. But enforcement of the no-fly zone and offensive strikes are just two indicators of success. The ultimate value of the operation will come from knowledge and experience that personnel have gained from participation. Whether they serve as cadre joint air staff or unit and force commanders, their ability to think and work jointly for the execution of the mission will be a major portion of the final success of JTF–SWA. **JFQ**



Combat Camera Imagery (Marv Lynchard)

JFACC Who's in Charge?

By J. L. WHITLOW

There is unanimity that the Armed Forces will fight as a joint team in the future. Each of the services has come a long way to make joint force a reality, but real difficulties remain in the area of command and control. It is time to take off the doctrinal blinders and look harder for the solutions. One concern is command and control of joint air operations. The capabilities, flexibility, and multi-service character of aviation make a Joint Force Air Component Commander (JFACC) important to most joint operations. Some say that a JFACC's actual responsibilities make the role more that of a coordinator. Regardless, there is likely to be a JFACC in most large joint operations. What then is the problem? Why do many dissent in reviewing joint doctrine on this subject? Why are CINCs unable to agree on a concept? The answer lies in understanding the needs of joint commanders at all levels and building the proper dynamics into joint decisionmaking and tasking processes.

we do not wage functional fights, but we demand functional excellence

To gain some insight into possible solutions, one must first understand that we simply do not fight in a functionally centralized fashion. This is evidenced by the Army-Air Force AirLand Battle concept and the Marine Air Ground Task Force (MAGTF) concept. Neither concept is about organization; rather they involve teamwork and combined arms philosophies. The Navy's surface, subsurface, and aerospace systems are tightly woven into a combined arms warfighting capability. Service commanders must master a range of joint and component fires to decide a battle and shape the next one. It follows that commanders must have adequate authority to direct actions necessary to accomplish their missions.

We do not wage functional fights, but we demand functional excellence. That search for excellence requires striking a balance between centralized, sub-optimized, functional efficiency and decentralized authority that subordinate commanders need in order to succeed. The JFACC identity crisis, the *coordinator* versus the *commander*, is nothing more than different views of that balance.

Everyone agrees that a JFACC is indispensable. But instead of fashioning the organization desired, we appear to be forcing existing, unwieldy processes to work. For various reasons, there is little innovative thinking about procedures and processes that could solve legitimate warfighting concerns. It is time to stop arguing and to start

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looking at the specific areas where progress can be achieved, namely, apportionment, targeting, a concept for a purple JFACC, and a vision of the future.

Apportionment

What passes for apportionment guidance is not *guidance* at all. It is interesting to note that the apportionment process found in joint doctrine to produce guidance was not used in Operation Desert Storm. How should the process work? What's wrong with the methodology? What kind of process can be proposed that provides guidance from a joint force commander (JFC)? At present the process goes something like this:

- the JFACC proposes apportionment to the JFC by percentage and/or priority that should be devoted to various air operations and/or geographic areas
- the JFC approves apportionment which is usually specified in terms of percentages allotted between anti-air warfare (AAW), close air support (CAS), and air interdiction (AI)
- the JFACC then develops air tasking orders (ATOs) and attack target lists using assets apportioned to AI.

At face value this seems to be a reasonable process, but it does not really produce guidance in a JTF environment. It is fraught with several problems, including percentages.

Percentages Don't Work. First, when determining the percentage of air assets to task for the CAS, AAW, or AI role, the decision is mostly a function of the force list, and not of how a JFC wants to fight the war. In other words, many aircraft are only employed in a certain role. Hence, attempts to provide guidance in terms of a *percentage* are often nothing more than an approximation of the make-up of the force list, and not guidance on warfighting. But to arrive at percentages a JFACC must almost write the ATO in advance and, to get requisite information, make preliminary decisions on targeting priorities and the allocation of assets which may or may not be in agreement with a JFC. When such effort goes into an ATO, it is very difficult to change without completely rewriting the plan, and a complete mindset change by JFACC planners. Finally, percentages are a very poor way for a JFC to articulate guidance. For example, while he may have a "gut feel" that CAS should have a high priority, he is very unlikely to disagree with the *percentage* of total sorties dedicated to it. The important thing to a JFC is *not* whether there is 23 percent or 33 percent CAS, but whether attack aircraft are available when ground commanders need them. A JFC should state guidance and priorities in terms of how he wants the war fought and leave percentages to analysts.

Guidance. Most real JFC guidance for an air war will probably be off-line and not about percentages among AAW, CAS, and AI. A JFC knows that airspace must be defended by AAW and CAS must be provided as needed. A JFC's on-line guidance should recognize the relatively constant requirements for AAW and CAS. This leaves AI. JFC guidance will better influence the total air war effort if a "main effort" is designated (the most important thing the force is attempting to accomplish that day) and associated priorities within the AI category are provided. For example, early in a campaign when a JFC believes the force should focus on an enemy's air capability, the priority is offensive counter air (OCA). In a new phase strategic targets may be more important and AI—theater air interdiction—is the focus. As an operation matures the ability to maneuver on the ground will be a priority and the focus will be shifted to shaping the battlefield or battlefield air interdiction (BAI).

A primary factor in any sequence similar to the one described above will be a JFC's sense of phasing. By not forcing the *apportionment process* to give a JFC a meaningful way to provide guidance appropriate for each phase, the system abdicates that responsibility to a JFACC. In the fog of war, when decisions are less than obvious, this process failure pits one component against others for priority and provides for little more than a source of additional friction. The remaining question to be answered is how the guidance for joint force air operations should be changed.

Givens, Main Effort, and Priorities. Forget percentages, neither component commanders nor a JFACC need to be preoccupied with arbitrary percentages as aviation plans are transformed into an ATO. Instead one should adopt a different way of thinking about the air effort, and thus a different approach to articulating JFC guidance.

Defensive AAW should be a given. If threatened by enemy air, a joint force must provide sufficient assets and a viable plan to protect them. If the threat is real, there is no higher priority. There is no need for percentages; a JFACC must ensure success.

if forces are heavily engaged and need CAS, the world's superpower should be able to provide it

CAS should be a given. Is it that simple? The answer is yes—from the perspective of JFC guidance. If forces are heavily engaged on the battlefield and need CAS, the world's superpower should be able to provide it. While guidance is simple, planning and conduct are not. Dedicating a percentage of the force to CAS will not ensure success or comfort a commander. There must be a viable plan. Ground force commanders and a JFACC must have a common understanding of the following points:

CAS flow plan

- ▼ *scheduled*—capability (not numbers) synchronized with ground scheme
- ▼ *alert*—prepared to surge with unexpected
- ▼ *divert*—based on specified parameters

CAS command/control/communication structure

- ▼ viable, in place, and understood
- ▼ as uniform as it can be made, yet allowing each of the services to fight the way they are organized, trained, and equipped

Divert criteria

- ▼ consciously decide what authority a JFACC has to divert dual role aircraft from or between interdiction missions
- ▼ consciously decide what missions are not to be diverted unless directed by higher authority

Apportionment guidance should be provided for AI under two rubrics:

- ▼ *main effort*—the most important task now being accomplished by the entire force
- ▼ *priority*—for air interdiction among OCA (such as airfield strikes), AI (strategic targets), and BAI (targets in ground commander's AO).

[AI here pertains only to theater-level targets, which conflicts with the joint definition. Either a new term is needed for theater targets or an amended definition for AI as suggested. Also, the term BAI must be entered in the joint lexicon as discussed below.]

A predominant relationship exits between priorities and the shifting phases of a campaign, for example:

Phase I—*create air superiority*

- ▼ main effort — JFACC—kill enemy air power
- ▼ priorities — OCA, AI, BAI

Phase II—*shape the theater*

- ▼ main effort — JFACC—kill enemy C^2 and logistics systems
- ▼ priorities — AI, OCA, BAI

Phase III—*shape the battlefield*

- ▼ main effort — Army, Marine, or Navy AOs
- ▼ priorities — BAI, AI, OCA.

As campaign phases blend together, flexible priorities could optimize air efforts for the changing nature of the conflict.

In sum, it is senseless to have a JFACC accept input, make assumptions, write a skeleton ATO, apply the force list to it, arrive at percentages, propose them to a JFC, and have a JFC feed those percentages back to the force—calling it apportionment guidance. There is no need to build a "percentage box" for a JFACC in order to ensure he is fighting the air war in accordance with JFC wishes. The onus is on a JFC.

A JFC must provide a good commander's intent to the entire JTF, with all that entails: a sense of phasing, perceived end state, etc. As for the air war, he must build a force that is capable of making air superiority and CAS a given. Then on a day to day basis, he must provide air apportionment guidance in terms of a main effort that applies to the entire JTF, and to priorities for air interdiction among BAI, AI, and OCA. With this type of guidance, a JFACC can fight the theater air war and ensure *unity of effort* throughout the theater, with air-capable component commanders focusing on their areas of operation and providing synergy to the joint campaign.

Targeting Process-es

The term *process-es* is not a typo. It is used to suggest a concept that is frequently lost in orchestrating joint air operations. Anyone who works in the world of joint air operations can recite the targeting cycle by rote: guidance, target development, weaponeering, force application (ATO), force execution, and combat assessment; then the

Combat Camera Imagery (Raymond T. Conway)

Navy F/A–18 Hornet landing aboard *USS America.*

cycle begins again. No one can match the ability of the Armed Forces in targeting an enemy strategically or operationally. There are extraordinary national assets and advanced technologies that make everything seem possible.

Yet when you look closely at the task of targeting from a complete theater perspective, you find that this simple cycle is not carried out at the theater level alone. It is done on various levels of command throughout the theater, in various areas of operation, at various speeds, and with various degrees of sophistication. Hence, it is not a single, simple process at all. When you envelope all *process-es* with a very centralized approach to targeting, it is somewhat akin to driving a theater's worth of round pegs into one small, sub-optimized, square hole.

To resolve this dilemma we must respond not only to interdiction needs of JFCs—which is done pretty well—but also corps-level ground force and surface commanders. Then we must link process-es at the right points to prioritize correctly, target responsively, and allow the services to *fight the way they are organized, trained, and equipped*. Third, we must develop the hardware and software capabilities that will make this possible.

Bring Back the Concept of Battlefield Air Interdiction. The methods of addressing a corps-level commander's need for interdiction in his area of operations (AO) are not very clear. Marines talk of MAGTF and a need for *direct support* sorties which are primarily CAS and *interdiction* missions flown within the MAGTF AO. The term *direct support sorties* has been coined basically to frame the argument about "who's in charge" of their tasking and control. Direct support sorties apply to both CAS and interdiction missions within the Marine AO.

The Navy's need to conduct air operations at sea has long been accepted. But as a result this need has been widely ignored in joint air operations, and interest is usually expressed in terms of how much they can contribute to the joint effort. The notion that the Navy also has a need for *interdiction* sorties, and that the sea and the littoral may be an *area of operations* for a naval component commander, has not generally been a joint consideration. This has been true except for operations within an Amphibious Objective Area (AOA), a recognized amphibious concept.

A corps commander has no direct way of obtaining a level of interdiction support by fixed wing aircraft in an AO. Instead targets must be nominated to a JFACC or JFC staff, then compete for priority with theater-level targets. Perhaps this explains the Army's great helicopter capabilities and Army Attack Missile Systems (ATACMS). At least the Army has some control over these capabilities.

Notwithstanding control, something is missing from the realm of joint warfighting. Each of the preceding descriptions was about *battlefield air interdiction* (BAI), but the concept does not exist in joint doctrine. The term does not appear in the joint lexicon. In order to add clarity to the joint air tasking process, we must promote the concept of battlefield air interdiction and adopt the term. JFCs need it to properly influence the battle.

Who's in Charge of Interdiction? With an adequate vocabulary it is possible to ask who's in charge of targeting various parts of the battlefield. For theater-level targets JFCs are obviously in charge and a JFACC is probably the best placed to coordinate an attack. JFCs shape the theater and try to deliver the knockout punch. However, when JFCs assign missions to subordinate commanders and give them AOs, those commanders should be *in charge* of targeting in their AOs. Yet the current process compels corps-level commanders to *nominate* targets up the chain to JFCs for *validation* and *prioritization*.

Combat Camera Imagery (Steve Thurow)

Marine F/A–18 at Aviano Air Base with Air Force AWACS in background.

What does target validation imply here? If it means corps-level commanders may not know what a valid fixed wing target is, then staffs have an education problem that needs to be addressed. If it means that only JFC staffs have adequate information and intelligence to determine if a target is valid, then information and intelligence systems are inadequate and must be fixed. But I suspect that it means neither of these things; rather, it is confusion over *who's in charge* of this segment of the battlefield and the victimization by a process that does not support commanders in their AOs.

And what is target prioritization? I do not believe that it means a JFC will prioritize targets in a subordinate commander's AO. However, if it implies that BAI targets must always compete with theater targets for attention, BAI will usually come up short. This will likely remain true until such time as the ground war goes to hell in a handbasket, or the importance of mission success in that AOs take on theater-level significance. While this may be an exaggeration, my point is that we have a clumsy system in place that prioritizes aviation-related targets only at JFC-level. We need a true *purple* system that prioritizes theater-level targets for theater commanders, allows BAI-level targets to be prioritized by commanders who are in charge of their associated AOs, and apportions by prioritizing under three interdiction categories: theater air interdiction, battlefield air interdiction, and offensive counter air.

A Purple JFACC

At first blush it seems that a JFACC should inherently head a purple organization, but there are several reasons why this is usually not the case. First of all joint doctrine embraces the notion of dual hatting. It is stated that a JFC will "normally designate a JFACC from the component that has both the preponderance of air assets in the joint operations area and the capability to command and control joint air operations." Conflict of interest in a dual hat situation is inevitable—if not in deed, certainly in perception, which is therefore detrimental to the joint force. You can argue that a JFC can augment the JFACC organization with personnel from other services and make it joint, or that it is really the only way to organize since components own all the necessary C^2 assets; but you cannot argue that it is *purple*.

Another factor is that the air tasking and C^2 system used in joint operations is generally not joint, but Air Force. It was not

intended to be joint, but rather to support an Air Operations Center (AOC), a highly centralized Air Force C^2 system that works well for a single component. But as a theater matures, its complexity increases. While separate AOs are created for various components, the system does not allow either horizontal and vertical communication or targeting dynamics. The Computer-Assisted Force Management System—employed in Desert Shield/Desert Storm—as well as the Contingency Tactical Air Control Automated Planning System (CTAPS) are both single-host computer systems that do not support interactive data base exchange or off-site direct ATO input.

we need an organization that can focus on aviation requirements of all service components

Progress is being made in this area. CTAPS has been designated a joint program and a lot of effort is going into developing follow-on versions of its software. Work is also underway on joint requirements for ATO. Such advances are significant, but doctrine must be based on existing capabilities. Thus we must make the joint air C^2 system purple since it was not designed that way.

What about JFACC organization? Three CINCs have come up with two different JFACC concepts that attempt to force jointness on what is basically an Air Force system. Both approaches have problems. The Atlantic/Pacific (LANT/PAC) concept of operations (CONOPS) comes closer to creating an organization that is truly purple. I personally fought hard for this concept, but it has a down side. Although the internal staffing is joint, it still maintains a dual hat approach at the top (that is, the JFACC is normally a service component commander). And, while the organization's line numbers are assigned to each component to be filled, it is always a "pickup" game. There are no individuals permanently assigned. Thus each operation differs; the preoperation training burden is high and not well suited for crisis employment. Purple? Almost, but it may not meet our needs.

U.S. European Command (EUCOM), in contrast, has published a JFACC concept peculiar to that theater. Aware that there may not be time to assemble a pickup team, EUCOM augments the Air Force AOC with liaison officers and weapon system experts from other services. While it is obvious why this is done, it is also clearly not an attempt to create a purple organization.

What is the answer? Is a purple organization required? I believe we need an organization that can focus on aviation requirements of all service components. We need an advocate—outside the Beltway—for a truly joint air C^4I system, so as not to create one in the same agonizing fashion that joint doctrine is developed. This demands far more than asking components how many sorties they need tomorrow. It is a matter of setting up air space, molding a joint air tasking system, and establishing an environment in which a JFC can accomplish the mission and the services can fight effectively the way they are organized, trained, and equipped.

It is time to stand up a purple JFACC in each theater. The associated operating doctrine for each theater, however, has to be worldwide to facilitate the rapid introduction of forces. Though it will not be a full-time job, there should be permanent names next to every JFACC position and the individuals concerned should be trained. Doctrine must facilitate joint air operations whether or not a JFACC is dual hatted or designated from outside of the joint force components. The structure should be based on LANT/PAC CONOPS which is well conceived. Its individual members must be expert and train with each JFACC iteration in theater. In small operations or at the beginning of campaigns, where it makes sense to dual hat service component commanders, such individuals will join appropriate component staffs. In large operations, it might be advisable to stand up a JFACC that is distinct from all joint force components. The advent of a purple JFACC will free component commanders to focus on their missions and optimize the things which each component does best.

The Vision

The future is one in which the joint air C^4I system is real time and completely interactive, not single host; component air C^4I systems are the same or fully interoperable; controlled input is made to ATO from off site and various sources; all services adopt air tasking methodologies that are similar to the joint

system; and every air capable component may host a JFACC or alternately interact efficiently with a JFACC on a real time basis.

A notional scenario under such a system might see the Navy arriving first on the scene of a crisis, conducting initial air operations using an ATO and tasking system compatible with the joint air C^4I system. The ATO is initially written on a carrier and then on a command ship as the Naval Expeditionary Force expands. As units arrive in theater and are brought to bear, the ATO address list grows to include them. At some point a JFC is named and an officer from within the naval component is designated JFACC. Then the marines kick in the door and come ashore. The land AOR starts to expand. A Marine air command and control system is created and works well with a JFACC afloat. Direct support sorties for the Marines are written into the ATO from forces ashore, yet they are deconflicted and supported with tankers by a JFACC afloat. This could all appear on a single ATO, or applicable sections might be selected.

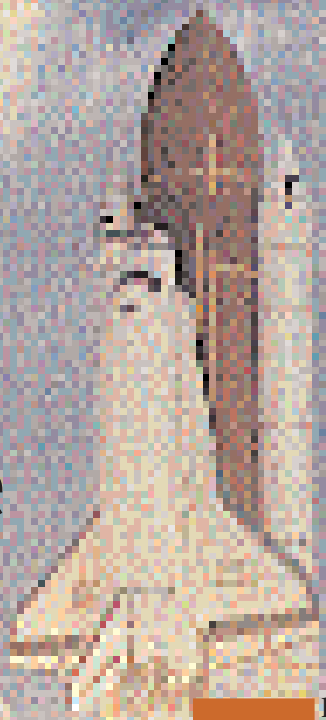
In another phase a JFC and his staff come ashore to coordinate with the American embassy and host nation. A decision is made to designate the Marine ACE commander as JFACC because of his proximity to a JFC. JFACC cadre (from the standing theater JFACC) come ashore. JFACC responsibilities shift to Marine Allied Command, Europe (ACE)—which is not a big deal since the ATO and joint air operations continue. Naval force direct support sorties now are written into the ATO from afloat and deconflicted ashore. Liaison officers are added to the JFACC staff as new capabilities and units arrive in theater.

The theater then expands as the Marines move out. Army forces are present in theater and operational. Boundaries are drawn and separate AOs for land forces unfold. The Air Force AOC stands up. Marine expeditionary airfields become operational and ACE relocates with the Marine Expeditionary Force (MEF) commander. A decision is made to transfer JFACC responsibilities to the Air Force component commander. Again, there is no big deal, the ATO and joint air operations continue. The big guns are there and each component focuses on its AO. The test is that through all this time B–52s operating from Guam received the ATO and struck the correct targets for a JFC, oblivious to where JFACC responsibility rested in any given phase. Each component contributed to the joint air effort while fighting the war in its respective AOR according to its own organization, training, and equipment.

Who's in charge? Operationally, *anyone* can be. The vision is simple: any component can supply a JFACC; systems are interactive and interoperable; components contribute efficiently to the joint air effort; and components fight in terms of their own organization, training, and equipment. In reality, until the next war breaks out, *everyone* is in charge. It will take a lot of work to create a truly joint air C^4I system. We must look to what can be fixed now, like apportionment, targeting, and organization. But such an effort will be in vain unless a vision of the future is articulated and differences among the services are turned into joint force advantages. While there is real merit in a rainbow of service traditions, assets, and capabilities, that spectrum must be predominantly purple. This is not that difficult to grasp in concept, but it will take time and tenacity to achieve in practice. It is worth the effort by all of us to make it happen. **JFQ**

Joint Space Doctrine: Catapulting into the Future

By GEORGE M. MOORE, VIC BUDURA, *and* JOAN JOHNSON-FREESE



Space Shuttle *Discovery* soaring aloft with classified primary payload.

NASA

> [Desert Storm] *was the first space war*
>
> —Merrill A. McPeak [1]

The end of the Cold War is forcing hard choices in every area of defense, including space architecture. Proponents of the civilian space program have been struggling since the moon race for a *raison d'être*, unable to identify one that is technologically feasible and politically marketable. They envied the end-all argument that national security policy justified the military space program, although that enviable position may be about to come to a dead halt. Declining defense budgets have left the military searching for a course to match an aging force structure with emerging national interests. Space systems have long been deemed desirable but protractible capabilities. There is a need for military space systems—as unequivocally proven by Desert Storm—but such programs now compete with traditional hardware and follow-on con-

Summary

The defense community has been drawn into another, perhaps even tougher contest since the demise of the Soviet empire, namely, garnering resources in the face of increased claims by domestic priorities. But threats to national security have not vanished; they have just assumed less predictable traits. Despite the past vitality of the military space program, especially in contrast to civilian programs, fiscal realities may adversely impact on its future. But information from all sources—including space—may prove to be an effective weapon against new threats. Information dominance will provide the stimulus for the military space program in the near term. Maximizing the capabilities of the information weapon, however, requires formulating joint space doctrine that has broad support and applicability. This doctrine will provide a significant advantage for the United States over those nations which employ space assets in a piecemeal fashion.

ventional weapons systems for the next century. The transition from an identifiable threat to what Les Aspin called several "largely undeterrable threats," coupled with the Clinton administration's emphasis on domestic issues, has caused DOD to consider cutting almost anything high-risk, which includes most space systems.

As a result requirements must be prioritized, then available funds maximized to meet them. Joint space doctrine can provide priorities by offering a coherent vision for employing space forces that significantly enhance national security. Clear goals will help in determining the requisite tools (force structure and equipment) for this task. Defining goals and then planning a procurement and deployment strategy is a keystone of rational decisionmaking.[2] Matching goals, plans, and tools is a framework well understood but not always fully utilized in the Pentagon.

Earth as seen through Clementine's one-pound visible light camera.

DOD

Clementine 1 being launched aboard Titan IIG in January 1994.

DOD

Where No Doctrine Has Gone Before

Military doctrine has been traditionally developed retrospectively, by looking at mistakes or successes. Inexperience, however, necessitates a less traditional process concerning space. This fact does not detract from the need for a coherent space doctrine to determine future functions and force structure with which to carry them out. A first step in this process is to open a dialogue on the issue which forms the purpose of this article, namely, defining overall goals for military space programs and developing the operational doctrine to match.

Space activity was prompted initially by the desire to employ U.S. technological superiority and enhance national security, but there appear to be no clear goals to bring that about. A coherent doctrine for the near term should focus on information from space forces in support of terrestrial strategic deterrent options, as offensive space-based weapons are prohibited by treaty. So unless a determined effort is made to set complementary goals for military and civilian space efforts into the 21st century and develop the technology efficiently, there is a risk that the United States may face its next major conflict with only a slight improvement in the capabilities which it enjoyed in Desert Storm as well as see a major loss of civilian space momentum.

After the Gulf War there was near unanimous agreement that space-based systems greatly increased the overall effectiveness of coalition forces. Even so, the systems did not come close to achieving their full potential. The Armed Forces have systems that collect and relay data worldwide at speeds approaching real-time. The dissemination of this data, however, relies on an array of processing and communications equipment along with evaluation personnel in a less than optimum process. A way to improve on the Desert Storm experience is to introduce the concept of information dominance as the primary goal of

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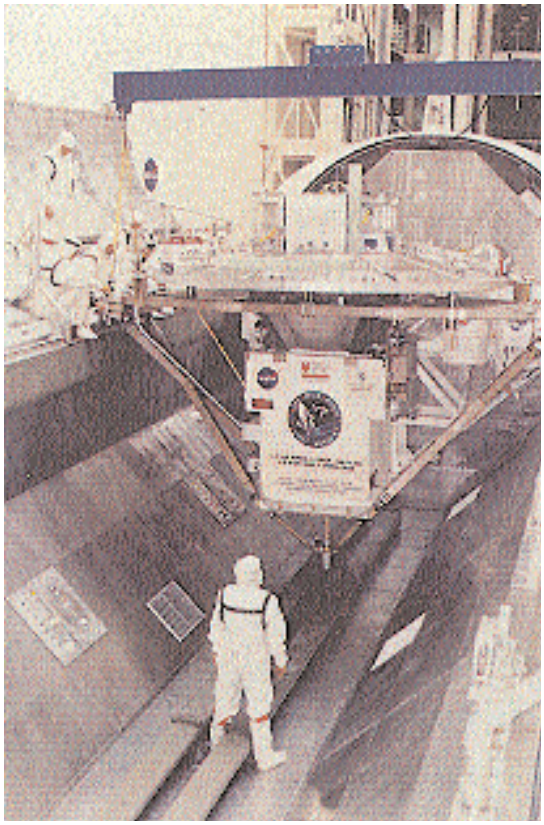
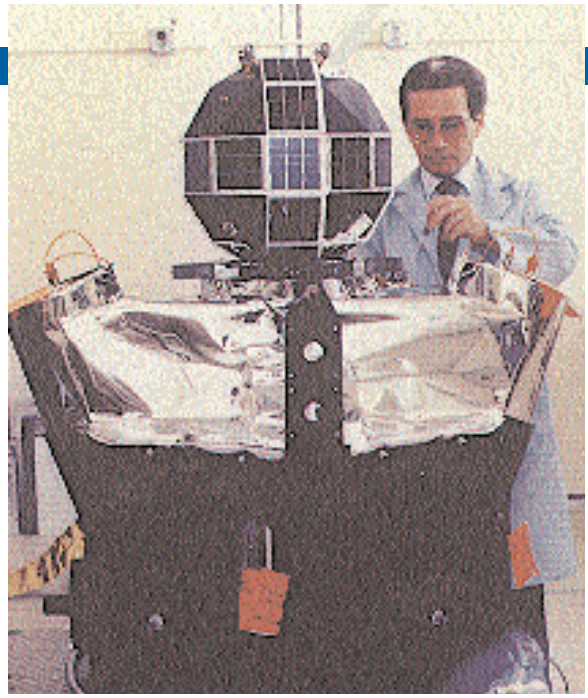


NASA

Vertical Processing Facility.



NASA

Navy experimental communications satellite for Pegasus launch vehicle.

joint space warfare doctrine.

Information dominance, namely, the ability to optimize surveillance, reconnaissance, and data correlation to determine illegal or belligerent intent on the part of an international actor, is an appropriate application of near-term space assets. This capability would provide the Nation with the closest thing to conventional deterrence across the operational spectrum, from competition in peacetime to open warfare, since the atomic bomb and would significantly enhance global stability in the face of many "largely undeterrable threats." In fact, information dominance has the potential of becoming the deterrence strategy of the future.

military space systems involve leading edge technology and are high-cost and high-risk

Access to Space

The plain truth is that cost-control of critical national security space programs has not been a major factor. The resulting technology and hardware have therefore been far from cost-effective. With the exception of Saturn V and the Space Shuttle, civil launchers are examples of technology first developed for weapons programs. Subsequently, as budgets tighten, launchers increasingly seem dysfunctional in the civil sector, where the Federal Government is not the sole customer and profit is the principle motivator.

Military space systems involve leading edge technology and are high-cost and high-risk. If their output is quickly and accurately provided to decisionmakers and operating forces, the pay-off is extremely high. In the space arena, where $1 billion is normally the ante for a seat at the table, it is crucial to have a game plan to meet the multi-billion dollar requirements.

The cost of space launch requires a large share of annual military operating budgets. Multi-mission spacecraft optimize employment of today's expendable launch vehicles. Spacecraft size and weight limitations, and thus multi-functionality, are often determined by launch limitations. As one Air Force officer stated, "The shuttle program spends $5 billion a year to launch eight times. The military is spending the same amount on Atlas, Delta, and Titan. We are being bled to death by the shuttle and Titan."[3] This raises the critical question facing anyone attempting to develop a coherent space doctrine, military or civilian: When will we solve the dual issues of rapid access to space and reducing cost-per-pound-to-orbit? Indeed, this issue has three parts: cost, timely response, and sufficient volume to support national security requirements.

Doctrine—Past and Present

Joint doctrine is authoritative, not directive. If joint doctrine conflicts with service doctrine, joint doctrine takes precedence unless the Chairman provides more current or specific guidance.[4] The history of early space doctrine reflects the growing appreciation of the functionality of space forces in modern conflict but is focused on the present rather than the future.

The initial discussion on anything resembling space doctrine took place in the Eisenhower administration when the Soviet Union and United States vied to be the first to launch an orbiting satellite. In August 1955 the Stewart Committee was tasked by DOD to choose a satellite program for use with Eisenhower's Open Skies space policy. The Naval Research Laboratory's Project Vanguard was chosen due to the nature of its scientific research and the fact that it would have no impact on military space efforts. On October 4, 1957 the Soviets stunned the world by launching Sputnik I with their new SS–6 intercontinental ballistic missile. The general consensus within the national security community was that Sputnik was not a military threat. Equally important, with the lack of worldwide objection to overflight, Sputnik I literally wrote overflight into international law. Because of American interest in monitoring Soviet military activity, the legality of satellite overflight was in fact as much or more a national concern as being the first in space. Americans perceived that they were behind the Soviets in missile technology; and Sputnik opened the door to the largest single burst of technological expansion this Nation had ever experienced. No price was too high to re-establish technological superiority. The age of the eye-in-the-sky was rushed into existence.

Like the right to conduct satellite overflights, a good deal of space law is construed either on convention, which remains unchallenged internationally, or treaties. The overarching principles come from the U.N. Charter. The United States operates on the premise that any activity pursued in the national interest is permitted save for those specifically prohibited by the U.N. Charter or the treaties to which it is a signatory such as the Antiballistic Missile Treaty of 1972.

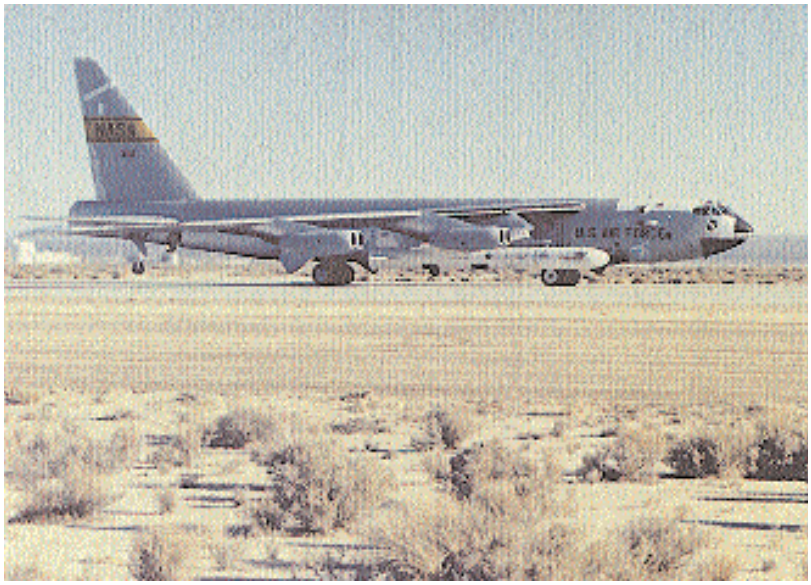
Another significant factor in discussing joint space doctrine is its interaction with treaties and international law. Treaties, unless specifically stated otherwise, regulate peacetime interaction between the signatories. This is especially appropriate to the discussion of what technological and hardware capabilities are required for the spin-up phase of impending or suspected hostilities. Quick response, capable, multi-function systems are highly desirable in such situations.

Joint space doctrine is still being developed. A proposed document draws on lessons from Desert Storm, "the first space war." While no American weapons were employed in space during the Gulf War, information provided by and passed over space systems greatly contributed to the speedy and overwhelming success of coalition forces. Joint Pub 3–14 addresses the functions of military space capabilities: force enhancement, force application, space control, and space support. Each function is given equal time in the publication in order to explain its purpose, but all are directed toward supporting the terrestrial warfighting community.

Focusing on support for the warfighter can lead one to assume that the joint process has decided on force enhancement as the most politically acceptable and attainable function around which to structure space operations. In other words, because systems like antisatellite weapons or Brilliant Pebbles are not currently appropriate to the global threat, then space support (launch and satellite control) and force enhancement of terrestrial systems become the only true functions. This may be an appropriate approach to military space forces for the next few decades but at some point an enemy will develop technology to neutralize our space sensors. Now national security depends on having the technology to counter enemy countermeasures against deterrence. The continuation of a technological lead is essential to responding to, and controlling, the early stages of a conflict.

Developing a New Joint Doctrine

There is a consensus among the services that space is important though it is not clear why. What can space do for the joint warfighter? The interesting dichotomy until



NASA

Pegasus air-launch space booster on board NASA B–52 carrier aircraft.

Desert Storm was that, in general, the Air Force and Navy manned systems while the Army and Marine Corps armed men. As lethality increased in the Gulf War with the M1–A1 Abrams tank and advanced helicopter armed with precision guided missiles able to kill armor and weapons systems outside engagement ranges, even the Army and Marine Corps found themselves manning systems of tremendous versatility and destructive power. Now the challenge is for joint forces to direct and focus this lethality with such precision that even the threat of its application serves as a real deterrent to all rational opponents.

how much one can do in space technically will be limited by access

More consideration must be given to what if any limitations are imposed on space doctrine. Such limitations are primarily technical and legal. How much one can do in space technically will be limited by access. But legally the United States cannot limit access to space by any nation, much as it cannot keep another country's ships off the seas or planes out of the air. In times of war such limitations succumb to national security imperatives; but in peace they are a real consideration. The exploration of technology to support space based weapons is prudent and necessary.

Given those limitations the only realistic near-term goal is deterrence. In a time of "largely undeterrable threats" and "fantastic opportunities, greatly disguised as unsolvable problems,"[5] space offers the best chance of beating the odds. The Armed Forces should have a goal of utilizing space to provide the best timely information on global events to prevent brush fires from becoming infernos. By definition irrational actors act irrationally and manipulation for advantageous position will always occur; but knowing that the United States can monitor and respond with immediate and lethal force will decrease the attractiveness of such actions. With a goal established in a joint space doctrine, a plan can be developed to achieve information dominance in any conflict situation.

In addition to documenting past experience, doctrine should also point to the future. A good example is the doctrine of daylight strategic bombing which developed ahead of its actual use in combat but drove technological developments that enabled the effective use of airpower during World War II. Likewise, we need joint doctrine that clearly defines space control and force application to support the evolution of space systems from a pure supporting role into a menu of joint space force options whose stated purpose is to ensure overall U.S. space superiority. All the services look to the near future when space systems will achieve information dominance over their respective battlespace. Information dominance goes a step beyond mere force enhancement of our capabilities since it implies some measure of control over an enemy's ability to use space systems to generate and transmit information to its national leadership.

Joint space doctrine should emphasize space power just as Joint Pub 3–05 stresses air and space power. For the first time the new National Military Strategy addresses space in terms of space power. This concept of power requires that joint doctrine go beyond force enhancement and space support to advocate doctrinal tenets that not only identify basic thoughts and operational concepts with respect to terrestrial and space warfare, but support multi-use military, commercial, scientific, and environmental research activities in space in the absence of conflict. Joint doctrine should avoid service roles and missions and establish doctrinal goals for future space forces.

Dual Use

Developing joint doctrine must also consider those pragmatic realities to which the services may be driven by economic constraints. Hardware acquisition is a case in point. One way to keep acquisition costs down is to design dual-use (civilian and military) sensors among commercial and civilian research applications to meet everyday nonmilitary requirements and, at the same time, be ready with secure, highly capable, on-orbit general purpose sensors for military use in crises. This Civilian Orbiting Reserve Force (CORF) could well be made available under much the same criteria as the Civilian Reserve Air Fleet (CRAF). There are many studies on the shelf dealing with the use of commercial communications satellites (SATCOM) in this manner. In fact, DOD bought all the commercial SATCOM capacity available and used it in an ad hoc way to ramp up the through-put to support Desert Storm communications requirements. This was also true for weather support because the Defense Meteorological Satellite System (DMSP) and the National Oceanographic and Atmospheric Agency (NOAA) satellites are basically the same. In addition, the Global Positioning System (GPS) is viewed by many as a planetary utility rather than a predominantly U.S. military navigation system. This all points to the fact that the distinction between military and civilian space systems is rapidly disappearing and that structures and doctrines need to be adjusted.

The final ingredient of a true space doctrine is an explicit statement by the national leadership that space is no longer a sanctuary but rather the high ground of a global *infonet* which can be used for civil or military purposes. The disestablishment of the National Space Council has created a vacuum by removing a forum in which the national security community and the civil sector can discuss the space puzzle. Until this happens, a true joint space doctrine will not evolve since the requisite political support for successful implementation is not available.

Joint doctrine should blend force capabilities in a way that makes the whole larger than the sum of its parts. The elements of joint space doctrine are clear. Information dominance is essential to support deterrence and provide both a rationale and goal for a near-term military space program. Assured access to space is necessary for other activities. Just as we have placed more emphasis on CONUS-based forces and reserves, we must stress space transportation which supports a burst of activity when national security is threatened. The ability to develop and exploit space technology must also mature so that we can oppose countermeasures to the information dominance network. A realization of the impact of dual use of space technologies should drive decisions on what can be shared and what must remain exclusively in the military sphere. Finally, in the event that weapons in space are required to augment the sensor network for defense there must be doctrinal support and the political will for their development and deployment.

A joint space doctrine that considers these elements will not only direct the Armed Forces, it will also give the Nation a global advantage over countries which use space systems, military or civilian, on an ad hoc basis, without maximizing their efficiency or effectiveness. **JFQ**

NOTES

[1] Craig Covault, "Desert Storm Reinforces Military Space Directions," *Aviation Week and Space Technology*, April 8, 1991, p. 42.

[2] Graham Allison, *The Essence of Decision: Explaining the Cuban Missile Crisis* (Boston: Little, Brown, 1971).

[3] Teresa Foley, "Science Office Steps into Tangled Launch Vehicle Policy Debate," *Space News*, December 13–19, 1993, p. 23.

[4] This or similar phraseology can be found in the preface of every joint publication.

[5] Jerry Tuttle, "Commentary," *Space News*, November 15–28, 1993, p. 18.

Future Directions for WARGAMING

By PETER P. PERLA

Wargaming at the Air University.

U.S. Air Force

The early 1990s have witnessed political, military, and technological change which at times has seemed dizzying in scope and scale. The Soviet nemesis that loomed on the international scene for more than four decades has collapsed in political and economic disarray. The Russian phoenix arising from the ashes is enigmatic and unpredictable. Former states of the Warsaw Pact actively seek membership in NATO, partly in fear of a resurgent, virulently nationalistic, and potentially expansionist Russia. In the Persian Gulf a U.S.-led coalition waged what some described as the first high-tech conflict, one that was quarantined by American seapower, dominated by American airpower, and terminated by American armor. Military technology and concepts that

Summary

The opportunity exists to shift military planning away from the global war envisioned only a few years ago to ragged little conflicts that appear to be the biggest threats today. Operational analyses, field exercises, and wargames teach important lessons, with wargaming in particular helping create cross-service awareness. But enthusiasts must resist an overreliance on games—wargamers have been known to be dazzled by mechanical aspects of seemingly realistic combat situations and in the process to largely overlook the players. The best designed games may closely approximate reality while poor ones mislead and can exact a high price in lives as occurred at Guadalcanal following flawed wargaming at the Naval War College during the 1930s. As wargames continue to play an inevitable part in planning future contingencies, participants must avoid being beguiled by high-tech gadgetry and focus on the human agents who make decisions in wartime.

U.S. Air Force

Air Force Wargaming Center at Maxwell Air Force Base.

received a baptism of fire in Desert Storm—the Tomahawk cruise missile, Joint Surveillance Target Attack Radar System (JSTARS), and Joint Force Air Component Commander (JFACC)—promise to lead the Armed Forces into uncharted waters.

To deal with constant change in the geopolitical and military environment, policymakers, strategists, analysts, and operators are all looking for means to overcome the clouds of uncertainty that obscure the future. As defense budgets decrease, it becomes more critical than ever to identify new technological, operational, and political directions that will become most profitable to pursue. The services can no longer go their own way in research, development, and acquisition. As truly integrated joint operations become the norm rather than the exception to the rule, the Armed Forces must find the tools to help them fit together seamlessly—doctrinally, technically, and operationally.

wargaming is focused on the dynamics of war and on the interplay of human decisions

In a quest for such tools, many turn to wargaming. Because of its nature and long history, wargaming may seem an alchemist's stone that can transform uncertainty into prophecy, indecision into insight. From the potentialities of futuristic technologies to the possible implications of ancient animosities, wargaming tantalizes us with the apparent power to reveal hidden truths and uncover paths that ought be followed.

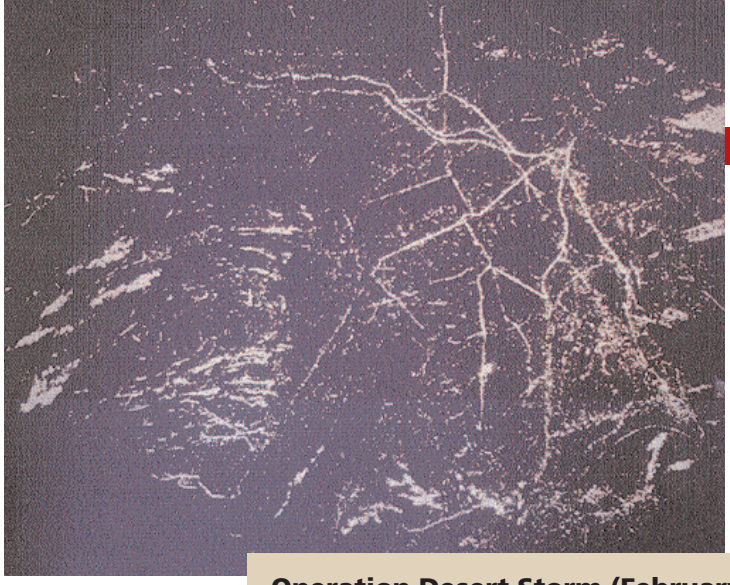
But wargaming is not a panacea. It is only one tool—albeit a powerful one—among many that we can employ to explore a changing world. When used appropriately it can contribute to an understanding of where we are and where we should go. In particular, it can help build truly joint forces from the capabilities of various service components. Misused or overused, wargaming can dangerously lead us to self-fulfilling prophecies and the delusions of self-proclaimed messiahs.

What is Wargaming?

To understand both the potential and the pitfalls of wargaming, one must understand what it is. Often the term is applied to any combat model, from computer simulations to field training exercises. But such a wide definition renders the term meaningless. More precisely, a wargame is a model or simulation of war conducted without maneuvering actual forces, and with a sequence of events that affects—and is affected by—decisions of the players who represent opposing sides.

Wargaming is focused on the dynamics of war and on the interplay of human decisions and possible outcomes of those decisions. Its value lies in the unique ability to illuminate the effects of the human factor in warfare. By nature wargames seek to explore messy, unquantifiable questions that the physical sciences and operations analysis must ignore. Learning what a game has to teach requires exercising qualitative disciplines associated with good analytical history, not quantitative techniques more often associated with science and operations research. Wargames teach us what we did not know that we did not know. And given all of today's uncertainties and questions, such a tool is invaluable. Indeed the potential value of wargaming manifests itself as a tool for education and training, a device to help develop and explore new concepts and operational plans, and an aid to explaining new concepts and ideas.

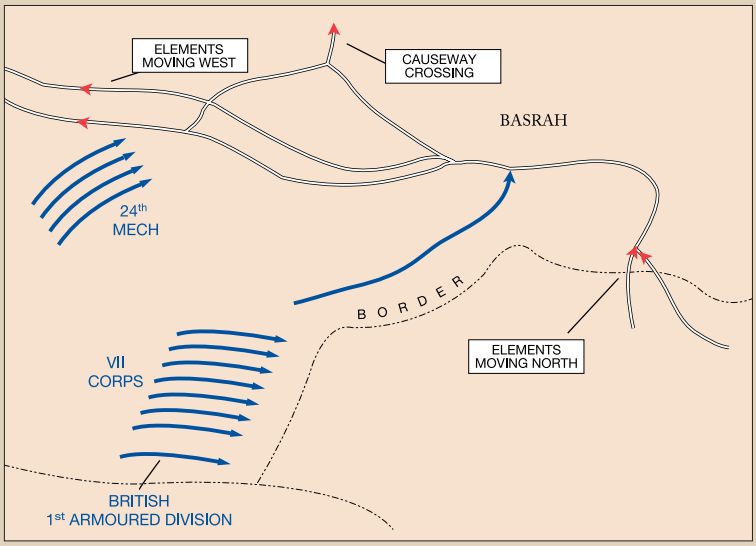
Peter P. Perla is an operations research analyst at the Center for Naval Analyses. His contributions appear regularly in *Fire & Movement* and *The Wargamer*; he is also the author of *The Art of Wargaming: A Guide for Professionals and Hobbyists*.



DOD

Desert Storm: JSTARS display on February 26, 1991, showing VII Corps in attack against Republican Guards and British 1st Armoured Division to south (at lower left) as traffic in Kuwaiti theater of operations moves north toward Basrah, and from that city west on parallel routes south of the Euphrates; the 24th Mechanized Division moves to interdict routes; (top center) traffic moving north across causeway.

Operation Desert Storm (February 26, 1991)



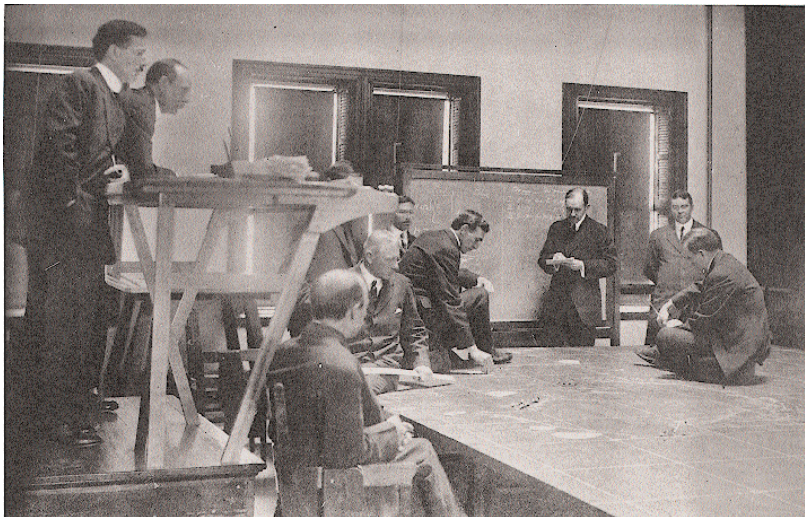
Used in training and education wargames make the participants translate their knowledge of strategy, tactics, or command and control into an ability to carry out their mission more effectively or understand reality more dynamically. For example, a prospective JFACC might be aware of the need to balance resources for air defense against those committed to projecting offensive airpower. By placing students in a wargaming situation in which they must actually manage the balance when faced with an active and aggressive opponent, instructors can demonstrate the problems associated with command as well as enable the students to discover the consequences of success or failure.

An exploratory tool, wargaming provides players and analysts, observers and participants, with new insights which can lead to further investigation of the validity and sources of their views. Wargaming compels participants to look at reality from different perspectives and to fundamentally change the way in which that reality is perceived. If the initial design of a game incorporates well known critical factors into the models and procedures, the play and the issues raised can lead to the discovery of other factors which may have been previously unsuspected or undervalued.

By allowing human decisions to influence events made under the press of time and on the basis of imperfect or incomplete information, and by incorporating the caprice of randomness and luck, gaming comes closer than other intellectual exercises to illuminating the dynamics of warfare. By illustrating the effect of these unquantifiable factors in concrete terms, wargaming also helps to illuminate the sources of that dynamism.

In the final analysis, as an explanatory device, wargames can effectively relate historical, operational, and analytical insights. The latest intelligence about operational doctrines and strategic or tactical options of potential adversaries can present commanders with new problems and challenges to find feasible solutions. Wargames can vividly portray the operational implications of advanced weapon systems by forcing the players to deal with the opportunities and difficulties presented, rather than by simply providing numerical estimates of limited technical parameters. Wargames also recreate constraints of knowledge and capability under which commanders have had to operate in the past, giving players and researchers a fresh look at why things happened as they did. Such insights help offset the distortion and intellectual arrogance that too often accompany the gift of 20–20 hindsight.

Participants in wargames are not passive. The interaction of participants with the



Courtesy U.S. Naval War College Museum

Apparent fleet-level action at the Naval War College, circa 1914.

scenario, systems, and each other provides opportunities to develop new insights. The insights can, in turn, prompt more detailed historical, operational, quantitative, and scientific analyses with results which can be incorporated into follow-on games. Such sharing, testing, and revising of knowledge and understanding is fundamental to the productive use of wargaming. It is also one of the reasons that wargaming can be effective in building an interservice appreciation of the full range of capabilities and vulnerabilities of a joint force.

Some Cautionary Notes

The power of wargaming to communicate and convince is also a potential danger. Gaming can be an effective way of building consensus on key ideas or factors in the minds of participants. They attempt to create the illusion of reality, and good games succeed. This illusion is a powerful and at times insidious influence, especially on those with limited operational experience. A poorly designed game, for example, might provide an unrealistic quantity and quality of information to the players. It could thus give a false picture of the value of a weapons system that relies on just such unattainable information to be effective.

a poorly designed game might provide an unrealistic quantity and quality of information to the players

Wargaming, as other approaches to study and analysis, may intentionally or unintentionally advocate particular ideas or programs which falsely color the events or decisions made in a game. Such problems may lead to self-fulfilling prophecies. Designers of wargames have great power to inform—or manipulate. Players and others involved in games must be aware of this danger. They deserve and should demand an explanation of why events run counter to experience or expectation. They must be allowed, in fact encouraged, to be skeptical and question the validity of any insight derived from a game until the source of the insight is adequately explained. If the reasons which underlie an insight appear artificial, the insight may be false and the system may need correction. On the other hand, surprising results can often lead to an important conceptual breakthrough. The key to distinguishing between them is in understanding how much of a game's outcome is driven by artificial models of reality and how much is driven by the decisions of the players.

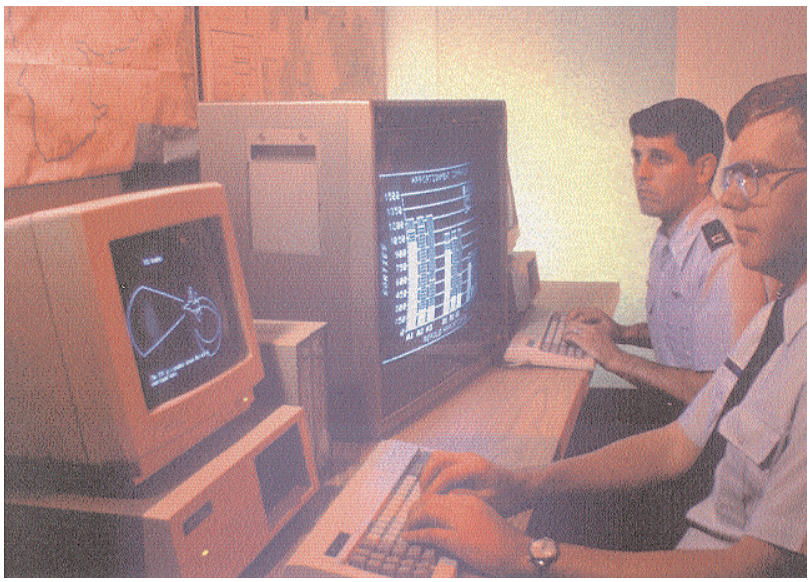
Finally it is important to understand what a wargame is not. A wargame is not analysis—at least not in any usual sense. It does not produce rigorous, quantitative, or logical dissection of a problem or define precise measures of effectiveness to compare alternative options. Nor is it real. Despite the similarities of gaming language and experience to aspects of actual military operations, its abstractions are many and often not obvious to those without real-life combat experience. And wargames cannot be duplicated, they cannot be replayed by simply changing the random numbers (or rolls of the die). The chance of independent games producing the same sequence of events and outcomes is so small as to be negligible. Wargaming is an exercise in human interaction—and the interplay of human decisions and simulated outcomes of those decisions makes it impossible for two games to be the same. As a result of all these factors, wargaming is not a panacea for learning

about or solving problems of warfare. Its forte is the exploration of the role and potential effects of human decisions; other tools are better suited to investigating the more technical aspects of reality.

Where is Wargaming?

Wargaming today is in a state of flux. Classical techniques of the seminar and path games remain popular. At the other extreme are technologies associated with virtual reality. Proponents of these newer technologies proclaim revolutionary breakthroughs in how we will portray, study, and evaluate military activities, breakthroughs that lie just around the proverbial corner.

Seminar games, in which the players meet in one or more groups to discuss their decisions and evaluate alternatives, continue to be probably the most frequently employed type of wargame. Because they rely to a great extent on the expertise of participants and not on rigidly constructed mathematical models, seminars are frequently the technique of choice for political-military games. Such games have proven invaluable in exploring issues arising from the political dissolution of the former communist countries of Europe. For example, in mid-1993 the Marine Corps Wargaming Center at Quantico hosted an especially interesting game that explored various options for resolving the Bosnian crisis. In addition, the Navy continues to use seminar games to explore programmatic issues in a newly revived series of Program Objective Memorandum (POM) wargames.



U.S. Air Force

Air Force Wargaming Center.

One of the more innovative developments is taking place at the Air University. While the Air Force Wargaming Center at Maxwell Air Force Base continues to run seminar and computer-assisted games, wargaming is also being used at the intermediate (or staff college) level to supplement more traditional readings and course work. Students receive a personal computer and software package, including computerized planning aids and game systems with which to explore lessons learned in operational settings. Last year the Air Command and Staff College convened a unique conference which brought together leading designers and experts in commercial hobby wargaming to discuss techniques that might improve military gaming for educational purposes.

Advanced techniques of distributed simulation coupled with the graphical magic of virtual reality systems promise wondrous capabilities. General Paul Gorman and some other proponents of these systems presented a dramatic demonstration of their power and promise to Congress a few years ago. That demonstration showed that distributed simulation can link separate tactical-level simulators from locations scattered across the country into a single overall combat situation. These capabilities enable a theater CINC to watch the operation of an individual ship, aircraft, or vehicle. It is a technological marvel, but to what end? In the real world a CINC seldom if ever can afford to focus on the operation of individual tactical elements of a joint force.

The danger of overemphasizing "gee whiz" technological capabilities of modern computers is obvious; yet when applied properly the techniques of virtual reality and distributed simulation are extraordinarily valuable. They can help enormously in training combat units at the tactical level. Computerized training can supplement a more limited use of field exercises to improve the overall quality of unit training with significant savings. But it is important to remember that no amount of simulation

Courtesy U.S. Naval War College Museum

Wargaming at the Naval War College, circa 1947.

can help develop and teach small unit tactics and doctrine. They can help disparate elements of a joint force learn more about the environment in which other elements operate, and demonstrate the capabilities and vulnerabilities of the different services and combat arms. But virtual reality simulations cannot fully substitute for well-designed and structured wargames and exercises of joint command and control. And it is on this crucial interface of joint operations that we must focus even greater attention in the future.

Command and control is also the interface where wargaming—with its emphasis on human decisionmaking under the pressure of time and based on imperfect or incomplete information—is most effective. We can find a classic example of how wargaming contributes to an understanding of joint command in the Warrior Preparation Center at Einsiedlerhof, Germany. U.S. European Command (EUCOM) and others use the facilities and techniques of the center to explore issues of joint command and educate joint staffs on these issues. In Trailblazer '93, for example, the center conducted a wargame to help EUCOM officers learn to implement the command and control and the planning functions of a JFACC staff in settling a confrontation between continental powers that required U.S. military intervention. During this game the players learned the crucial importance of balancing offensive and defensive air power when the opposition team launched several successful air attacks on friendly bases. They also learned the potential power of an integrated joint force as the JFACC staff managed the flow of information and controlled and applied the combat assets of the entire joint force efficiently and effectively.

can substitute for experience with actual systems in actual (not virtual) environments.

On another level virtual reality techniques let analysts and operators recreate and visualize combat operations in more accurate and useful ways which is a valuable analytical and educational tool. The truly spectacular use of SIMNET to recreate the Battle of 73 Easting in Operation Desert Storm demonstrates the enormous power of this technology. It helps us not only to explain what happened during an actual operation or exercise but, more importantly, to determine why things happened as they did. In a fuller way than was ever possible before, we can begin to understand what decisions forces made, on the basis of what information, and why and how that information conformed to or differed from "ground truth."

no amount of simulation can substitute for experience with actual systems in actual (not virtual) environments

But there should not be any illusions about the application of virtual reality simulation. The more we attempt to reproduce the details of actual environments and operations, the more and more detailed data we must collect and model. Detailed simulations

The gaming at the Warrior Preparation Center provides commanders and staffs with unique opportunities for realistic training through realistic command problems based on a realistic combat scenario. Even in this center, however, the players must adapt to a system and specialized devices. Not all the systems and techniques that would be used in a real confrontation when operating from actual command centers are employed. The next step in moving from situational to environmental realism is found in the Navy's use of a concept known as Battle-Force In-Port Training (BFIT).

gaming is particularly useful in educating commanders and staffs about service capabilities and components

In a BFIT exercise naval staffs respond to wargaming scenarios and developing situations using the same systems and procedures employed in actual operations. Typically, participants man their normal duty stations ashore and aboard ship and receive the gaming inputs through the actual sensors and communication systems. Such an approach to gaming requires careful and specialized preparation of data to insert into real systems as opposed to simplified gaming systems.

When successful BFIT is the most effective form of wargaming because it allows players to accomplish real-life functions in a realistically simulated artificial environment. Emphasis is put on commanders and their decisions, not on fancy virtual reality systems and exotic computer graphics. Technology is the servant of the players, helping them experience a realistic environment at a level of detail expected during an actual operation. This is the key to a truly great wargaming system.

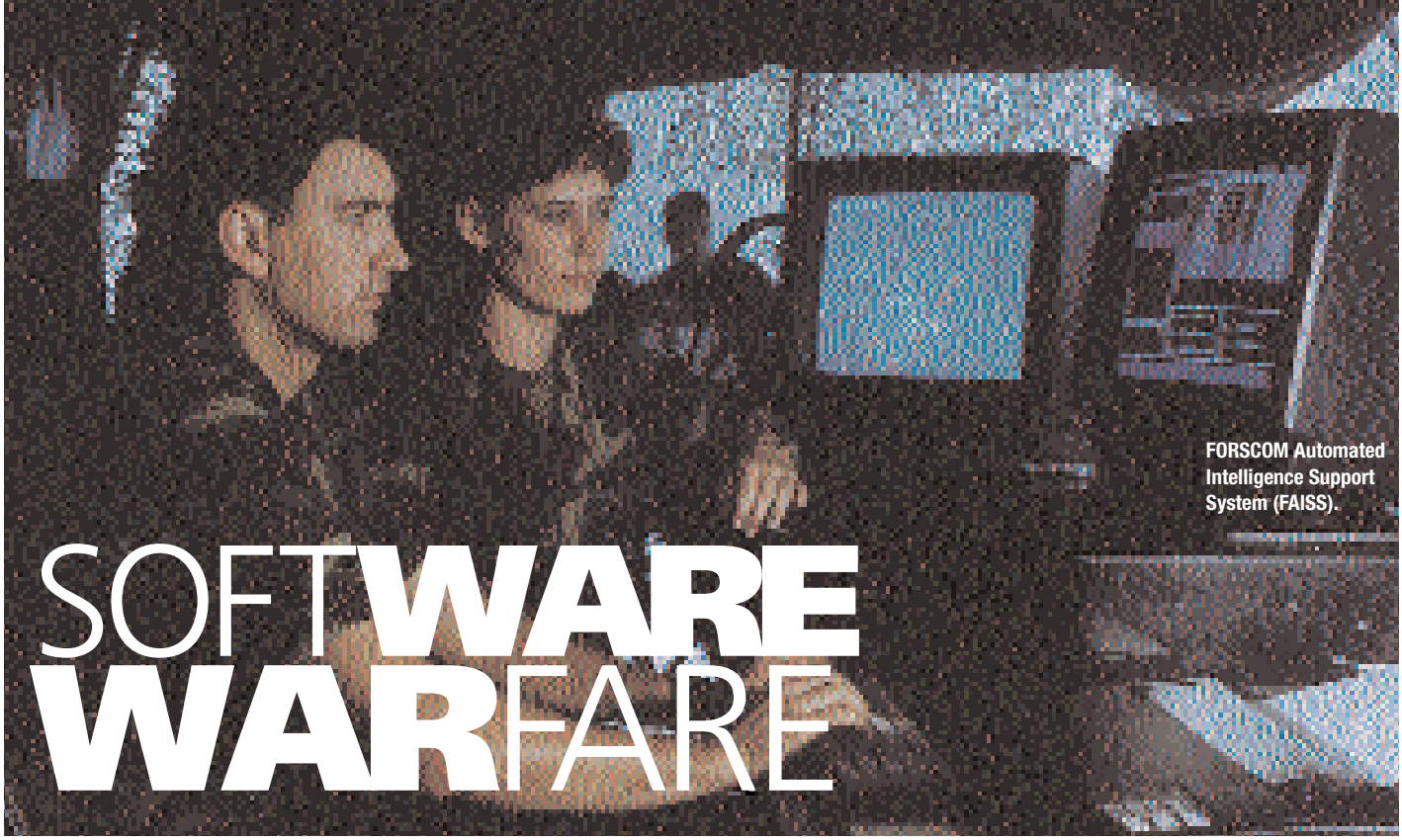
Whither Wargaming?

As we come to grasp the realities of a post-Cold War world, the Armed Forces must adapt. And, as defense budgets decline, the possibility that we may have to use force seems to increase, and the situations in which we are likely to use force are not those for which we are best prepared. Instead of massive battles on the plains of central Europe, we must prepare for dirty little wars in Bosnia, Somalia, or other remote locales that we are unable to identify today. The services cannot remain introspective as in the past. Jointness is not a fad—it is a fact of life that is here to stay.

History has shown that when the services work together for prolonged periods (as they did in the Solomons during World War II) they appreciate each others' strengths and weaknesses and integrate their capabilities to maximize the former and minimize the latter. In the future, we are unlikely to have the luxury of time to learn once a conflict has begun. The best time to learn these lessons is peacetime, and the best way to learn is in carefully integrating operational analyses, field exercises, and wargames. Gaming is particularly useful in educating commanders and staffs about service capabilities and components, and the command and control necessary to integrate them into a cohesive joint force.

In the 1930s the Naval War College slid slowly but surely into a quagmire of self-fulfilling prophecy. Seduced by the apparent power of models and enamored of the mechanics in apparently realistic representations of combat, the wargamers at Newport made the fatal error of emphasizing the system and deemphasizing the players. Naval doctrine that emerged from and reinforced those flawed wargames severely handicapped American cruiser and destroyer skippers when they confronted a clever and determined opponent who did not play by Newport's rules. The Navy atoned for its sins in the blood of sailors and the treasure of ships in the nightmarish battles off Guadalcanal.

Once again we face subtle traps; only today the systems are more powerful, the temptations more alluring. To avoid a future butcher's bill we must learn from the past. If we use wargaming, as we must, to develop joint doctrine and educate joint warfighters, we have to ensure that games focus on players and their decisions. We cannot afford to be distracted by exotic bells and whistles or dazzled by high-tech computer graphics. We have new and powerful tools just as we had in the 1930s. We must harness these tools, not permit them to dictate our purposes. **JFQ**



FORSCOM Automated Intelligence Support System (FAISS).

U.S. Army (Steve Lambert)

SOFTWARE WARFARE

The Militarization of Logic

By PETER C. EMMETT

We are witnessing an astonishing change in modern war. The volume of space in which coordinated military action takes place has greatly expanded, tending towards the global, while the time available for decisionmaking has shrunk, pushing the human operator increasingly out of the control loop. These tendencies first became apparent in air operations, but are now encompassing an increasing range of land, sea, space, and special operations, all linked or capable of being linked digitally as never before. The vital medium of linkage is software[1] which exists in a seamless and hidden terrain: logic. Although it underpins a remarkable and growing range of military activities, software has been regarded as the plaything of engineers or an enhancement to military hardware which lacked anything of its own worthy of exploitation.

Hidden within weapons systems, and fully comprehensible only to engineers or specialists, the growing role of software in modern warfare is easy to overlook. Yet software is more than an engineering tool. It is an operational entity and weapon in its own right that needs to be exploited to maximum effect like any other. It supplants an increasing range of military functions previously undertaken by combatants. On the

Summary

Software constitutes the digital linkage among land, sea, air, space, and special operations forces, a capability that will increasingly outdistance human agents who will have to master and use it in wars of the future. It will power the flow of data, fuse information into images in command centers, analyze intelligence, and direct weapons against an enemy. Battlespace will expand as the time to make decisions contracts. The Armed Forces will rely preeminently upon near real-time adjustments to the shifting sands of war, on the ability to strike at pivotal points in small windows of opportunity. Emerging operational doctrine requires streamlined and flexible communications software that is highly dependable. Drawing on the seamless terrain of logic will enable the joint warfighter to perfect the concept of cooperative weaponry.

The views expressed in this article are the author's and do not necessarily represent those of either the Ministry of Defence or Her Majesty's Government.

ground and in the air, from beam-steering radars to intelligence-gathering platforms, software drives many increasingly sophisticated sensors with capabilities that would otherwise be limited or not available. All types of information flows via the software-driven nodes of communications networks. It is fused and transformed into images at command positions and may be further analyzed by software. Action against an enemy is conducted using weapons whose performance is also likely to be highly dependent on software.

With the power and immense potential of software as the starting point, military technology is on the threshold of a leap forward comparable with, if not greater than, revolutions that brought about the mechanization of land forces and development of airpower. The paradox and inadequacy of current thinking is this: while matériel that plays a part in war is fully militarized and exploited according to its capabilities, the potential of software is left out of the operational mainstream. The means of introducing the military functions of software into the framework of formal doctrine must now become our highest operational priority.

Earlier in this century the great task of military theorists was to reconcile war with scientific and technological innovation. That difficult task, born of the senseless slaughter of World War I, was marked by a slow acceptance of change.[2] Then World War II, when enemies of civilization effectively incorporated mechanization into their warfighting doctrine, brought further catastrophe to the world and near total defeat for the Allies. At the close of the 20th century, military science has an immense new challenge equally vital to the performance in battle of those Western nations to whom this still matters—the militarization of logic.

Software Military Functions

The whole art of military effectiveness lies in the ability to move cooperating forces across a theater of operations in order to strike at the decisive points, adapting as rapidly as possible to the ever-changing and unpredictable fortunes of war. As a process this can be broken down into three basic elements: representation of the position, analysis of positional information and direction of firepower, and action of all types against the enemy. In essence, war is a cycle of "see, think, and strike" in which adaptability, intelligence, speed, and cooperation are vital ingredients. Software has now become so closely involved at all stages in this cycle that any analysis of software military functions might examine, as a reasonable starting point, the degree to which the logical analogues of each vital ingredient can be embodied within software operational doctrine.

Logical Mobility

If the analogue of firepower is processing power, then the analogue of movement in logical terrain is change—not only in the information that flows within the terrain, but also change in its logical features: the application and content of the programs fielded. Processing power designed to serve a particular tactical objective at one time may thus fail to serve it at another. To be effective, the required functionality must be adaptable. It must be logically mobile.

The tendency today is to build ever-increasing sophistication into military software. Every major and minor function gets coded, but the benefits of program sophistication are negated if it limits adapting programs in rapidly changing tactical environments. The relationship between size and adaptability is not a straightforward one. It depends on what is being changed, the number of affected program units, and the modularity of the code. The general consequences of program size must, however, be recognized and for every project its specific impact on defined functional areas must be assessed in terms of basic tactical criteria.

The Persian Gulf War resulted in emergency programming to meet unexpected challenges. These included software changes in thermal imaging and laser designator pods installed on aircraft by the Royal Air Force[3] and Firefinder weapon-locating radar adapted to a Scud missile detection role by the U.S. Army.[4] Such ad hoc program changes, implemented in time to be put to tactical use, represent the beginnings of what will undoubtedly be an important facet

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of future software operational doctrine, namely, tactical programming. This may be defined as transforming assets in logical terrain to deal effectively with the challenges of the moment. As software increasingly penetrates the tactical level, so will the need to exploit the adaptability characteristic of software. A compromise will be required between program sophistication, on one hand, and adaptability, on the other. Such a compromise is comparable with that between armored firepower and mobility. In this critical tradeoff software engineering is failing utterly to serve real military needs.

as software penetrates the tactical level, so will the need to exploit the adaptability of software

In the early days of computer programming the bulk and limited capacity of available digital storage technologies were severe constraints on program design and, hence, on the sophistication of system requirements. It also led programmers to find the slickest means of horning the required functionality into the available memory space, and favored efficient but highly obscure languages and programming techniques. Such programs were difficult to comprehend, but at least they were bounded and the implemented functionality was reduced to the operationally essential. With the exponential growth in memory capacity from the 1960s onwards, program size simply grew to fill available memory space. With diverse programming languages and poor development techniques, the need arose for programs in standard high-level languages in a framework of agreed software engineering discipline.[5] And as software engineering leapt ahead leaving operational staffs in a void of subservient incomprehension, it effectively hijacked the procurement process.

The quantity of software generated for military equipment today staggers the imagination. Freed from the bounds of computer memory size and aided by a growing plethora of development tools, programming teams routinely churn out lines of code by the millions or tens of millions. At the outset of a project, operational staffs are beguiled into building every conceivable sophistication into a project requirement, supported by a seemingly limitless capacity of engineers to generate the required code. In too many cases they are oblivious to development risks, maintenance costs, and program adaptability. The result is that the terrain of modern combat is filled by non-adapting dinosaurs—monsters of functionality bloated by excess requirements, the essential along with the unfiltered trivial. Such weapons will have no place on the logical battlefield of the future.

The latest rash of problems with the new generation of software-intensive fighter aircraft[6] should give pause for thought on the achievements of software engineering in the cold light of the military balance sheet. It is not that software cannot bring immense new capabilities. Rather, it is a question of placing the untamed power of software within a doctrinal harness to obtain effective military benefit from the capabilities. A primary task of doctrine is thus to impose a strict review process on the military functions that ought to be trusted to code and on the total extent of code that may be generated. The appropriate maxim might be: If it doesn't win wars, don't code it. The central aim must be to strike the right balance between war-fighting capabilities and future demands to alter those capabilities when the need arises.

The ideal adaption is one that can be generated in real-time during the course of battle. This is the domain of Artificial Intelligence (AI) that can be regarded as the ultimate in logical mobility. Though it is unlikely that software adaption can ever be uniquely of this form, software operational doctrine must embrace AI as a key strategic technology.

Battlefield Real-Time

The speed and complexity of modern conflict are leading inexorably to trust in a growing range of functions in the "see, think, and strike" loop to automated actions governed by software. A simple example is the automatic fire mode of guided weaponry, such as the Patriot anti-missile system, in which the linkage among sensor, threat analysis, and fire decision (with optional human override) is fully computerized. On the wider battlefield, if command and control decisions are to be made in tactically meaningful time, the sophistication of modern sensors and the vast quantities of

U.S. Air Force (David McLeod)

H–64 Apache assault helicopter.

information they generate means that the battlefield analysis process must itself be increasingly entrusted to software. An immense research effort in this area is already generating the tools of the future, such as the "Warbreaker" data base for finding time-critical targets being developed by the Joint Intelligence Development Staff.[7] Software-intensive weapons thus generate the need for speed in threat assessment and, as tactical activity in war speeds up, the requirement for speed of decision generates the further need to trust intelligent systems. The human element will always be present, but it is being progressively swamped, marginalized, and obliged to depend on capabilities and flexibilities written into command and control software at the outset of a conflict. Preparation and innate adaptability, achieved by sound doctrine, are the keys to future combat effectiveness.

software-intensive weapons generate the need for speed in threat assessment

The greatest changes in the practice of warfare are likely yet to come. On the battlefields of the present era, software is omnipresent but exists in each case as a servant of some well-contained command and control function. Intercommunication among software elements may take place, but the human combatant remains the principal means of linking the "see, think, and strike" loop. It is important to recognize the strong temporal dependency of any threat and that the more effectively an opponent operates in logical terrain, the faster the threat will change. The human link becomes ever more the weakest, and inexorably automatic fire modes will replace slower manual processes as this becomes technically feasible. However, this cannot be a localized development confined to weapon software in isolation from other elements on the battlefield. In order to exploit the speed characteristic of software, there must be direct linkage and control back to the command and control position. Only here can the full picture be assessed and the most effective strike modes be identified. The central aim is, as always, to coordinate diverse forces to strike most effectively at the decisive points *at moments of vulnerability*.

With many competing demands for information and direction, a mechanism for resolving conflicts and allocating priorities will be essential. The analogy with the problem of real-time control in a multi-tasking engineering environment—well understood by the software engineer—is both striking and perfect. The logical battlefield is steadily evolving into a single, massive, real-time system in which human activity represents a subset of the total process. What is presently lacking is a battlefield real-time executive that is able to resolve conflicts and allocate operational priorities between competing and ever-changing demands on military hardware use. This resource must be able to employ the results of sensing and analysis to generate continually the optimum instantaneous strike posture for each weapon. Weapons would be assigned singly or by group and switched between local and autonomous control as necessary. The object would be to direct and coordinate available firepower at the weakest areas *as soon as the moments of opportunity arose*. The rationale of battle would be embedded in a

U.S. Army (Steve Lambert)

Soldier Integrated Protective Ensemble (SIPE) with image intensification and thermal sight, laser aiming light, and Load Bearing Component for computer or microclimate conditioning.

suite of analysis programs on continual call to the battlefield executive. An underlying operational doctrine must be wedded to battlefield intelligence here in order to generate specific operational directives. Here as well, operational flexibility must be maximized through program adaptability. The battlefield executive system would be nested in higher order executive programs. At the highest executive level would reside the strategic rationale from which immediate tactical priorities would be derived.

The exploitation of the software characteristics of speed, intelligence, and adaptability can be traced in the future battlefield system alluded to above. In the strict sense that the system would be centrally coordinated, a type of logical cooperation would exist. But combatants can also cooperate without recourse to higher command, an activity with no logical analogue as yet.

Logical Cooperation

Cooperation among software-driven weapons is a potent tactical concept. It is the artillery on the logical battlefield just waiting to be discovered. Totally overlooked in old ideas about war, it is the most compelling evidence of the need to alter perceptions of the nature of modern warfare.

cooperation among software-driven weapons is a potent tactical concept

The capabilities and potential of cooperative weaponry can be illustrated by the example of a stand-off tactical air-to-ground missile. Its requirements and specifications must be considered in terms of defined targets, for no single design could ever cope with the myriad of possible ground targets. For instance, concrete bunkers may be identified as the principal targets. A requirement to penetrate a given thickness of concrete will then be specified and the missile's body and warhead designed accordingly. Such a weapon will be less effective in roles outside the design parameters, such as area destruction of buildings or blast attack against scattered ground targets. By contrast consider the many possible modes of operation for a group of cooperating air-to-ground missiles. Under the control of a coordinating software, resource options would be open to attack in sequence or simultaneously and at one location or many. The results of an attack could also be employed in selecting targets for follow-on attacks, the selections being made instantaneously (real-time) by the directing software. Simultaneous or closely sequenced attacks on a single location would tend to be effective against hardened targets, while sequenced strikes against buildings could be employed until a desired effect was achieved. The many possible combinations could be selected either on a self-organizing basis or in response to directives from a central command and control position.

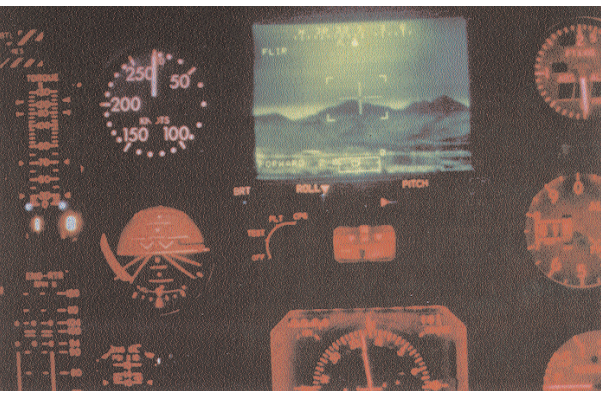
Weapons would attack in groups and act as cohesive entities, adapting to the characteristics of any threat and wrapping themselves around it at the weakest points. The significant benefits of logical cooperation would be greatly improved flexibility in weapon design and use, much greater collective destructive effect, and a potentially lower detection threshold achieved through the ability to disperse in defense and swarm during attack. A low detection threshold would favor developing small weapons. The joint applications of logical cooperation are as diverse as war itself, from air combat to undersea mine warfare. Its exploitation is likely when a need arises to apply force with maximum economy at times and places that will make an operational difference.

The Operational-Engineering Relationship

The role of doctrine is to serve as a guide to action, but software operational doctrine raises special problems of application because of the sheer complexity and esoteric nature of software. To be applied effectively, the relationship between the operational and engineering domains of military software development has to be clear.

Unbounded software production has led to project overruns, escalating costs, and

products that fail to meet design specifications. These widely recognized problems have been described as the "software crisis," and solutions have repeatedly been sought using a software engineering approach. However, the role of the engineer is to deliver on a request, not to determine its nature and scale. The crisis stems not uniquely from bad engineering but ultimately from inappropriate and anachronistic procurement philosophies that have failed to adapt to the peculiar difficulties of software development. In the military sphere, the way out of the crisis must be sought through operational doctrine that, by identifying the military functions of software, harnesses and directs the power of software within a coherent procurement rationale. Software operational doctrine will take years to establish but its relationship with software engineering may be simply stated. The purpose of software engineering is to maintain the operational capacity to deliver and support the new or altered functionality requested by the user, *in accordance with operationally defined criteria*. The role of software operational doctrine is to determine the scale, content, and operational quality of what ought to be requested. Thus this doctrine must not only be imposed firmly upon software engineering at all stages of project development, but it must also unhesitatingly interfere in the methodologies employed in software engineering. Software production is an operational issue.



U.S. Army

Flight simulator showing Forward-Looking Infrared Radar (FLIR) image from Target Acquisition Designation System (TADS).

As an example of the strategic insight that may be obtained through software operational doctrine, consider the need to establish, through doctrine, a set of criteria for operational quality. Operational quality has many facets but includes the frequent need to trust software to carry out its functions reliably. Degrees of required reliability are usually expressed in terms of the safety or mission criticality of program functions.[8] Such classifications are appropriate when programs undertake well defined and compartmentalized support roles in a weapon or system and thus can be segregated effectively from less critical software. But as the role of operational software widens and is utilized more as a weapon in its own right, forging multiple and fast-changing linkages in fluid tactical environments, the distinctions between safety critical and non-safety critical software will become increasingly meaningless. Given the unpredictability of war, the importance of any single unit of code cannot be predetermined. This leads to the need to treat all operational software on the same basis and to the concomitant demand for performance reliability that is as near absolute as possible. Only mathematical proof can deliver such levels of assurance.

Processes by which programs may be demonstrated to be correct by mathematical analysis are termed Formal Methods (FM). These methods take many forms, but an important one is the capture of informally conceived requirements as a formal, mathematically describable specification. This is an intensive manual process that now can only be done by a limited number of specialists. Once a formal specification has been defined, however, the code generated may be analyzed with near absolute rigor, and a high level of trust may be placed on program performance.

Defining a formal specification has another potential benefit that future military leaders must fully grasp: it is a major step towards automatic code generation.[9] It may take a strong measure of operational awareness to advance the science of FM, just as armored warfare led to advances in metallurgy and mechanics, but achieving automatic code generation would represent a strategic asset of the highest order. Widespread use of FM and automatic code generation would lead to a major shift in the manual effort of programming (still required in hardware interfaces) towards the equally manual process of formal requirements capture. The major strategic gain would be one of greatly enhanced logical mobility through the ability to convert rapidly an informally conceived but immediate tactical need in a reliable battlefield program.

Automatic code generation would not, however, mean reducing the personnel requirement for generating military code and may well increase it. What it would do is alter radically the pattern of personnel use, both in operations and support. Operationally, the two principal roles would be control over operational program configuration and the continuous definition of informal software requirements. In the support area requirements would be captured formally by a team of dedicated specialists and converted into reliable code for immediate use in the theater of operations.

The organizational expression of the relationship between software engineer and combatant must also be a result of software operational doctrine, born of the need to ensure fast and effective cooperation between the support and operational areas of software combat. Viewed in this way the software engineer-combatant relationship may be compared with the well established relationship between field service teams and armored combat units. Both are concerned with the maintenance of field mobility, whether physical or logical.

winning wars must be the overriding criterion of all software development

The Future Battlefield

That software is a weapon in its own right is the justification and foundation of software operational doctrine. Winning wars must be the overriding criterion of all software development. There is no room for excess baggage in software warfare. The lumbering monsters of code on the nascent logical battlefields of today must give way to lean, adaptable, and communicative software that undertakes well-defined functions in an all-embracing strategic system.

Starting with the military prerequisites of adaptability, intelligence, speed, and cooperation, software operational doctrine has been considered in terms of logical analogues. Derived concepts of logical mobility, battlefield real-time, and logical cooperation have also been identified as a basis for further doctrinal development. From doctrine to practice, through a clearly defined operational-engineering relationship, arise requirements for speed in software development and absolute trust in operational software.

The idea of cooperative weaponry stems from considering software as a weapon in its own right, as opposed to a tool of particular hardware performance requirements. The technology for putting logical cooperation into practice has been available for many years. The missing ingredient has been systematic thinking to illuminate the strange new terrain on which the military of the next century will undoubtedly operate. The concept of cooperative weaponry surprised many when it was introduced in 1992. As the illumination of this new terrain increases it is safe to assume that logical cooperation will not be the last surprise to be found. JFQ

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[2] Robert H. Larson, *The British Army and the Theory of Armored Warfare, 1918–1940* (Newark: University of Delaware Press, 1984).

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[5] Barry W. Boehm, *Software Engineering Economics* (Englewood Cliffs, N.J.: Prentice-Hall, 1981).

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commentary

Cutting Defense

Method Instead of Madness

By DAVID F. TODD *and* RALPH M. HITCHEN

Among the detritus of the National Defense Authorization Act for Fiscal Year 1994 can be discovered a provision establishing the Commission on Roles and Missions of the Armed Forces. While the call for a blue ribbon panel to study a politically sensitive problem is a relatively ho-hum event—albeit the time-honored method of dealing with thorny parochial issues—the military ought to be alerted to the fact that this commission might really do something. As the pundits are quick to remind us, we live in a new era, and the commission's recommendations may prompt far-reaching changes that otherwise would not occur.

the call for a blue ribbon panel is the time-honored method of dealing with thorny parochial issues

Happily for those who cleave to the status quo, the roles and missions debate means turf, and past efforts to make the services come to grips with this issue have yielded predictably limited results. The Chairman of the Joint Chiefs of Staff reports to Congress on roles and missions every three years. In February 1993 General Colin Powell sent his "Report on the Roles, Missions, and Functions of the Armed Forces of the United States" as required by the Goldwater-Nichols DOD Reorganization Act of 1986. The Bottom-Up Review—though not specifically aimed at roles and functions—indirectly evaluated areas of suspected overlap. Neither of these documents, however, proposed fundamentally altering the traditional allocation of roles and missions among the services.

But we are reaching a point where congressional frustration with military obstinance—real or perceived—might boil over. Senator Sam Nunn observed in a speech delivered in July 1992 that a thorough review of service roles, functions, and missions was needed because of the drastic change in the international order. The budget deficit and diminished threats combine to create high levels of public interest in downsizing (or *rightsizing*) the Armed Forces. And a steadily increasing turnover in Congress will eventually dilute the traditional "balance of power" on Capitol Hill that preserved and protected service-parochial interests during the Cold War. But the sacred cows may soon be slaughtered and rice bowls shattered—with the impetus coming from the all-encompassing review implicit in the mandate of the newly created Commission on Roles and Missions.

For the commission to have an impact it must distance itself from previous attempts

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to look at roles and missions along the traditional fractious lines of service components and showcase systems. It must find a way to evaluate military forces and capabilities within a common analytical frame of reference. Instead of comparing apples and oranges, it must compare apples and apples. One way to do this is by adopting a *strategy-capabilities evaluation methodology*.

Problems, Paradigms, and Frames of Reference

Many and probably most evaluations of roles and missions take on a service versus service perspective—endeavoring, for instance, to compare similar units or echelons like divisions, wings, carrier battle groups, etc. Such a methodology has the reductionist virtue of getting directly to the point, that is, the all-important questions of turf and budget, but it clearly lacks intellectual rigor as well as the thoroughness and relevance demanded by the real world of military operations.

Figure out what you don't do well, and then don't do it!

—Attributed to Alf, the TV Alien

For example, a direct comparison of the capabilities of heavy bombers versus carrier-based aircraft is inadequate. Only in a context of how the systems are employed—what operational tasks each might be called upon to accomplish—can valid judgments be made. One way to employ these systems might be to either disrupt or destroy military C^3 and other high value fixed targets. In this context the capabilities of bombers and carrier-based aircraft is compared in a meaningful sense. But to complete the analytical process other systems and forces must be considered. These include but are not limited to direct fires from attack helicopters and Special Operations Forces; indirect fires from field artillery, multiple launch rocket systems, and advanced tactical missile systems; direct action from electronic warfare assets; strikes from carrier battle groups with F–14, F/A–18, and A–6 aircraft, surface action groups with naval fire support and tomahawk land attack missiles (TLAM), nuclear-fuelled submarines with TLAM, and Marine special warfare assets; and interdiction from a range of land-based aerial strike assets with AV–8B, A–10, F–16, F–15E, F/A–18, F–117, F–111, AC–130, B–52, B–1, B–2 aircraft. Without an employment context—in other words, objectives—and an assessment of available systems and force elements, comparing heavy bombers with carrier-based aircraft is an exercise in futility.

Buzzwords to Methodology

The strategy-capabilities evaluation methodology is a two-phased process. In the first step, a strategy versus capability framework is used to correlate military capabilities through two parallel perspectives. One perspective, the *strategy process*, systematically extrapolates military tasks from national goals or interests. Borrowing heavily from the RAND Corporation's publicized *strategy-to-tasks* framework, the strategy process is a series of interrelated top-down decisions which link national goals and interests with operational objectives and tasks. Operational objectives represent agreed on criteria for the successful prosecution of military operations. The *service organizational hierarchy* parallels the strategy process. It is a systemic refinement of service roles and functions, with the ultimate goal of cataloging and defining operational capabilities of force elements available to a commander in chief. Correlating these analytical paradigms as illustrated below will, in turn, result in a strategy versus capability matrix.

Whereas RAND's strategy-to-tasks framework was designed to evaluate the procurement of weapons systems that would support theater or campaign operational objectives, a *strategy versus capability matrix* will identify what operational objectives a geographic or functional CINC must accomplish and compare those with the operational capabilities that service combat elements bring to the fight. The significance of all this for the current roles and missions debate—and the work of the newly-created, congressionally-mandated commission—is that by using the validated strategy-to-tasks framework, we have a tool to evaluate the utility of various force elements and the associated weapon

the strategy-capability methodology compares similar force *capabilities*—not force *elements*—among the services

U.S. Air Force (David McLeod)

C–17 Globemaster II.

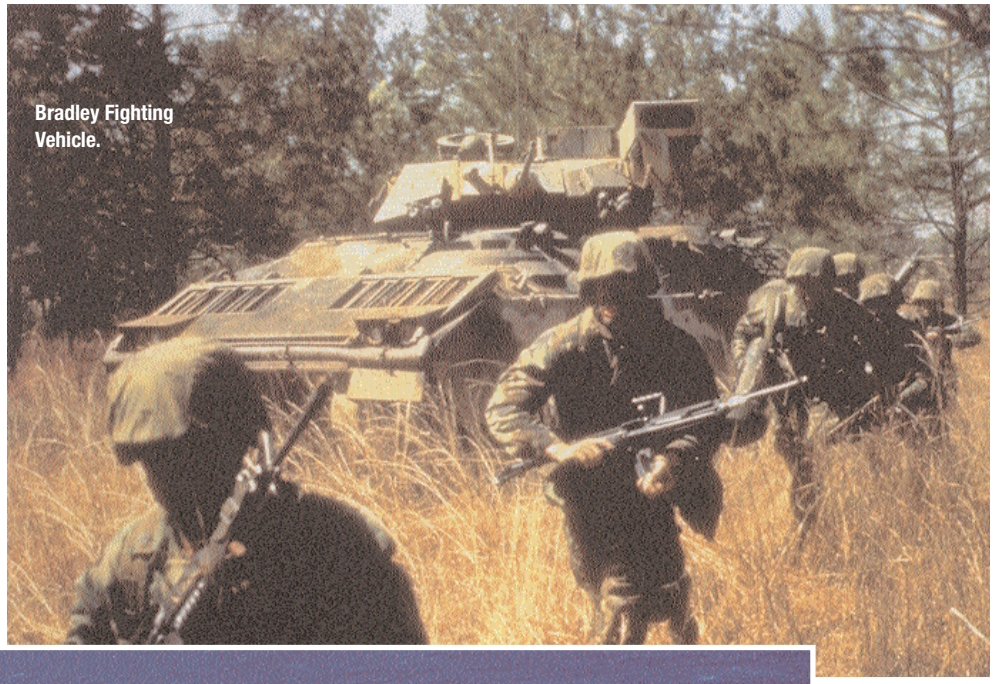
systems within a common frame of reference—a tool that if used properly will enable us to identify service-specific capabilities that may be redundant.

The second phase of the strategy-capabilities evaluation methodology refines the analytical focus on suspected redundant capabilities as opposed to forces, avoiding a traditionally fatal detour into service component turf concerns. Decisions on reducing forces will inevitably be made, but only after a detailed evaluation determines whether the capabilities or forces in question—those that deliver capabilities we have identified—are redundant or complementary. Redundant forces can accomplish the same operational objectives and tasks as other forces. But while complementary forces may accomplish the same operational objectives and tasks, they also have unique capabilities that enable a wide range of applications.

U.S. Marine Corps

Marine M–1 Abrams.

This phase is the *force systems capability evaluation*, a structured process which compares forces suspected of being redundant. Validated criteria must be used for a thorough comparison of forces to see if they are either redundant or complementary. Representative criteria might include weighing advantages and disadvantages regarding the strategy-capability evaluation methodology. This methodology has a number of advantages that recommend it to the Commission on Roles and Missions and that could have a



Bradley Fighting Vehicle.

U.S. Army

U.S. Navy (Kenneth H. Brewer)

Guided missile cruiser *USS Wainwright.*

significant influence in debates over defense in general, and force reductions in particular. Using this methodology the commission will have an unassailable analytic device with which to reach its recommendations. First, it takes a framework of proven worth in force planning and acquisition matters—namely, strategy-to-tasks—and adapts it to evaluate force structure. Second, it compares similar force *capabilities*—not force *elements*—among the services. Apples can finally be compared with apples. Lastly, the methodology lends itself to establishing analytically derived common evaluation criteria. In this way a significant amount of "gut feel" can be systematically weeded out of the process of evaluating force structure.

Applying this methodology will do more than merely identify redundant force capabilities. It will also illuminate the unique contributions of each force to the battlefield and the flexibility of complementary capabilities. Where redundancies are identified, the commission might recommend eliminating some force elements associated with those capabilities or, alternatively, conclude that the operational tasks associated with the capabilities are crucial and justify a degree of redundancy.

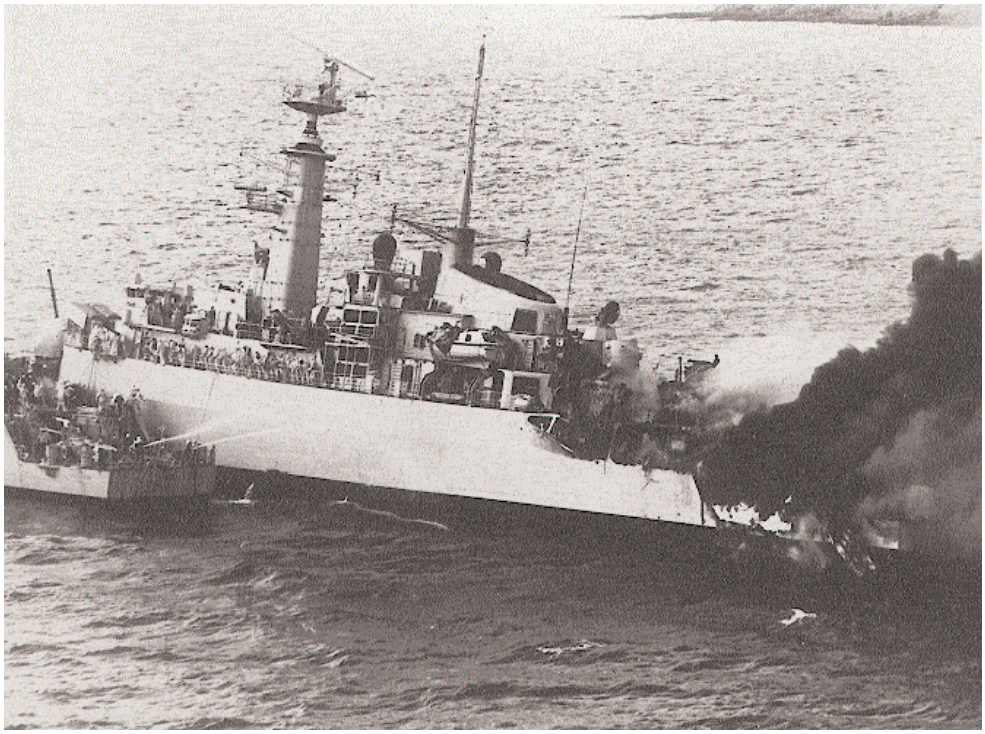
The Unkindest Cut

It appears defense spending will continue to be cut. Prudent military planners on the west bank of the Potomac would be wise, for example, to look seriously at how to divide a slice of the pie that amounts to no more than 2 percent of GNP. But the question now before Congress is not *how much* to cut, but *what* to cut.

We are endorsing a methodology that will endow the deliberations of the Commission on Roles and Missions with a serious degree of analytical rigor. Absent rigor, its recommendations may result in ill-advised, across-the-board reductions in the Armed Forces—with a multitude of proverbial babies being thrown out with the bath water. Such actions would clearly jeopardize the unassailable military superiority which the Nation enjoys and result in putting goals and interests at risk. There must be a clear understanding of what is at stake on both sides of the River, for it is a lot more than ships, aircraft, and divisions with historic lineages. To paraphrase a trendy political expression, it's the *capabilities*, stupid! JFQ

Argentine Jointness and the Malvinas

By ROBERT L. SCHEINA



Royal Navy

HMS Yarmouth **training hoses on** ***HMS Ardent*** **which burns out of control after being hit by Argentine air force and navy planes.**

Identity is as basic to an institution as it is to those who comprise it, and once established identity can assume greater importance than survival itself. This is particularly true of the military. The Argentine experience in the Malvinas (Falklands) reveals that military institutions must evolve in order to succeed and that adherence to institutional identity can be fatal if maintained at all costs. Jointness existed at the operational and tactical levels within the Argentine armed forces during the Malvinas conflict, but it did not exist either strategically or doctrinally. In virtually every case it was the product of initiatives by mid-level officers who put aside service parochialism to confront a common enemy. There are a number of specific illustrations which stand out.

The Argentine air force operated the only tankers in the inventory. The two KC–130s were essential to air strikes against the British fleet whether carried out by air force or naval planes. For example, Skyhawks (flown by both services) had at most a few minutes over their targets if not refueled in the air. The Malvinas were barely within range of the attack aircraft of either service. In addition, every mission flown by the navy's Exocet-armed Super Etendards required at least one air-to-air refueling. These planes carried out five attacks, the second of which sank *HMS Sheffield* and the fourth *Atlantic Conveyor*. The last Super Etendard attack on May 30, 1982, needed a triple refueling to strike over

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Super Etendard with Exocet missile prior to attack on the morning of May 4.

Argentine Navy

500 miles from base and to circle and approach from the east. Without the air force, Argentine naval aviation could not have sunk *HMS Sheffield*, *Atlantic Conveyor*, and *HMS Ardent* nor have damaged other ships.[1]

The defense of the airfield at Puerto Argentina (Port Stanley) was also joint. The air force contributed search radar; the navy communication, plotters, and direction personnel; and the army twin barrel, radar-controlled Oerlikon Contraves 35mm guns. Following an initial attack on May 1 by British

Close-up view of damage to *HMS Sheffield* (note Chaff rocket launchers which were part of a system designed to offer protection from missiles like Exocets).

U.K. Ministry of Defence

Chronology

April 2 Task Force 40 puts Argentine forces ashore near Port Stanley; Moody Brooks Barracks and Government House seized

April 5 British carrier group sails from Portsmouth

April 12 maritime exclusion zone comes into effect around Falklands

April 14 Argentine fleet leaves Puerto Belgrano

April 21 South Georgia operation begins

April 25 South Georgia recaptured by British forces

April 29 British task force arrives at exclusion zone

April 30 total exclusion zone comes into force

May 1 initial SAS and SBSD landings; first raid on Port Stanley by Sea Harriers and naval bombardment

May 2 *General Belgrano* sunk on orders of War Cabinet with loss of 321 Argentine sailors

May 4 *HMS Sheffield* sunk; first Sea Harrier shot down

May 7 total exclusion zone extended to 12 miles off Argentine coast

May 9 trawler *Narwhal* attacked

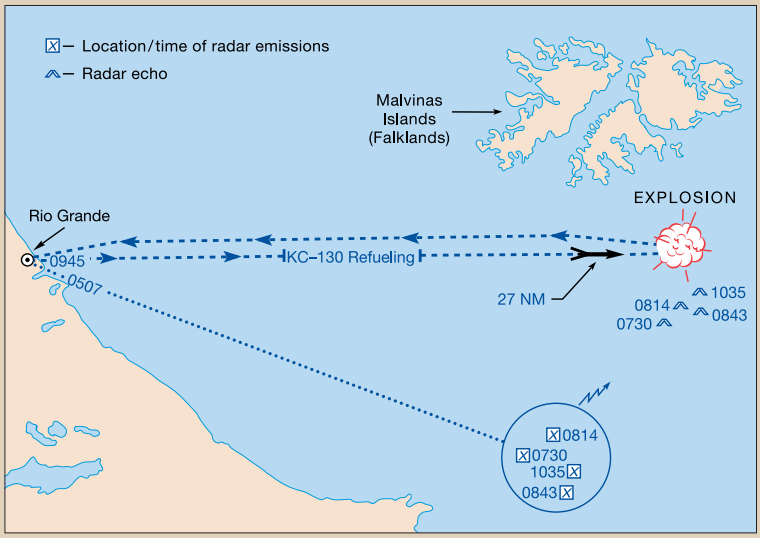
Vulcans and Harriers, the latter had to change tactics from close-in bombing to less accurate lob bombing. This was due largely to the effective Argentine anti-aircraft defenses which were credited with shooting down five Harriers, plus a few Argentine aircraft which strayed too close. Importantly, the defenders kept the airfield partially operational throughout the entire conflict. The fact that in spite of British activity an Electra carrying supplies was able to land on June 14 (the day Port Stanley fell) testifies to the success of this joint effort.[2]

Another success that can be attributed to jointness was the Exocet missile which hit the destroyer *HMS Glamorgan*. In April, while tensions were building over the Argentine occupation of the Malvinas, the Argentine navy removed two Exocet missiles and launchers from the destroyer *Santisima Trinidad*. It married these to a jury-rigged fire control system and then mounted them on old trailers and christened them *Instalación de Tiro Berreta* (a do-it-yourself firing system). It took an air force C–130 three attempts to get the system to the Malvinas. Once on the island, the system was mated to an army Rasit radar operated by a marine officer. The first attempt to fire a missile failed, perhaps due to damage sustained in transit. A second missile veered sharply to the right because of a bad connection. On June 12, two days before the fall of Port Stanley, a third missile slammed into *HMS Glamorgan*.[3]

Other cases of Argentine jointness arose when air force attack aircraft trained against navy type 42 destroyers (the same class of ship found in the British fleet); the air force and navy shared meager reconnaissance assets; and the air force carried navy Exocets between Rio Grande and Espora for maintenance. Unfortunately for the Argentine cause such ad hoc efforts on the operational and tactical levels were too few and too late, and could not make up for a lack of joint strategic planning and doctrine that was necessary to overcome the inertia fostered by each service's institutional identity.

Today, the Argentines are fully aware of the price that they paid for this lack of jointness. In 1982 the last military junta tasked a retired army general, Benjamin Rattenbach, to conduct an investigation of the war effort. Rattenbach, renowned for his professionalism, headed a joint team which produced a secret report. Eventually, many of the report's findings were leaked to the press and, in 1988, a group of veterans published the full report under the title of *Informe Rattenbach: el drama de Malvinas*. The report concluded that there was a lack of joint training and planning, and what did exist was purely theoretical and unable to be (translated) into action.[4]

Super Etendard Attack on *HMS Sheffield* (May 4, 1982)



Source: Robert L. Scheina, *Latin America: A Naval History, 1810–1987* (Annapolis: Naval Institute Press, 1987), p. 267.

May 12 *QE2* leaves Southampton with 5th Brigade on board

May 14 SAS attack on Pebble Island

May 21 San Carlos landing begins. *HMS Ardent* sunk; 16 Argentine aircraft lost

May 23 *Antelope* sunk; 7 Argentine aircraft lost

May 25 *HMS Coventry* and *Atlantic Conveyor* sunk

May 28 Battle of Goose Green; 5th Brigade trans-ships from *QE2* at South Georgia

May 29 42d Commando lands on Mount Kent

June 1 5th Brigade disembarks at San Carlos

June 2 2d Para leapfrogs to Bluff Cove

June 6 Scots Guards land at Fitzroy; Welsh Guards embark for same

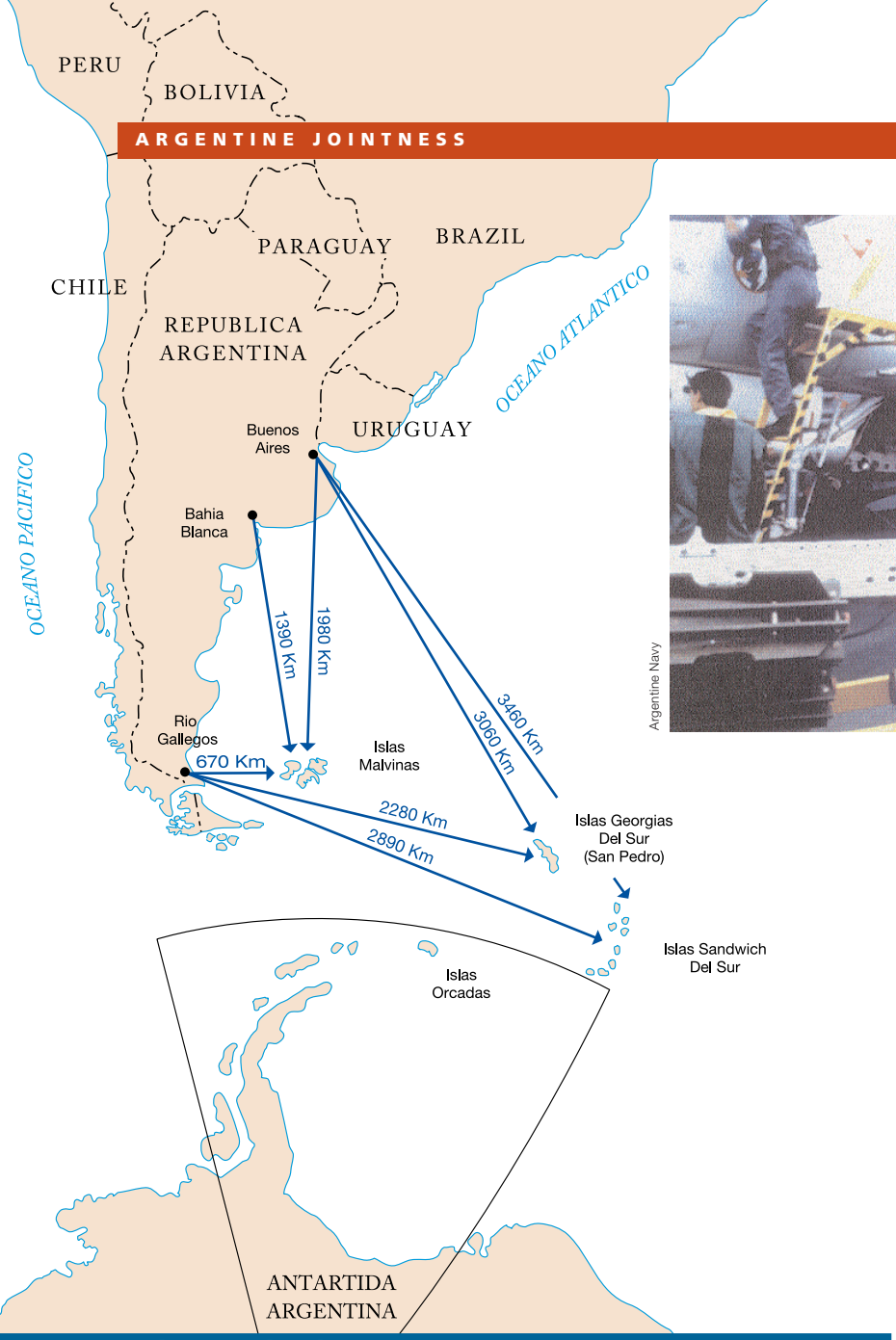
June 8 Disaster at Fitzroy; *HMS Galahad* and *HMS Tristam* bombed with loss of 51 crewmen

June 11 Battle of Port Stanley begins; Mount Longdon, Harriet, and Two Sisters

June 12 Battle of Tumbledown and Wireless Ridge

June 14 Argentine forces surrender at Port Stanley

Source: Max Hastings and Simon Jenkins, *The Battle for the Falklands* (London: Michael Joseph, 1983), pp.341–43.



Malvinas Islands

Source: Public Information Secretariat of the Presidency of the Nation, *Islas Malvinas Argentinas* (Buenos Aires, 1982).

Argentine Navy

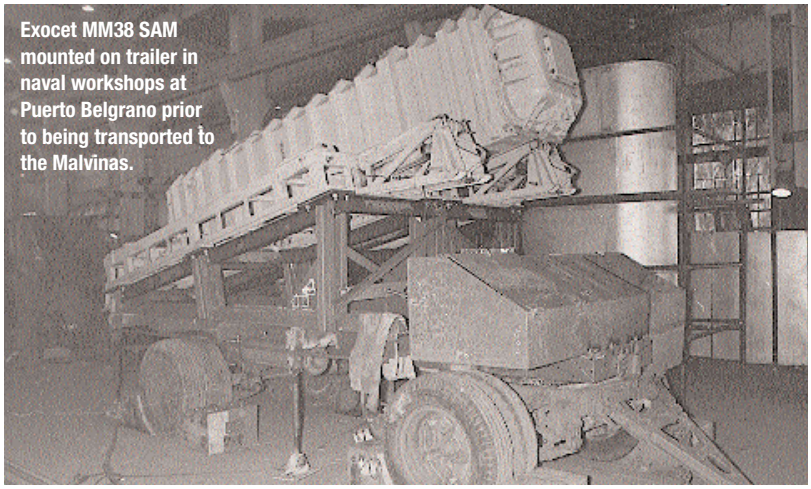
Skyhawk 305 being armed for attack on May 1 (the intended target of one bomb, *HMS Invincible*, has been enscribed by deck crew).

Argentine Navy

The architects of the Malvinas campaign conferring at Puerto Argentina: (from left) Rear Admiral Carlos Busser of the marines, landing force commander; General Osvaldo Garcia of the army, commander of V Corps in Patagonia and theater of operations; and Rear Admiral Gualter Allara of the navy, amphibious force commander.

Marine officer briefing 5th Battalion personnel with Puerto Argentino in distance.

(Carlos F. Ries Centeno)



Exocet MM38 SAM mounted on trailer in naval workshops at Puerto Belgrano prior to being transported to the Malvinas.

Argentine Navy

(Carlos F. Ries Centeno)

Argentine marine operating Rasit radar loaned to the navy by the army (at night the radar set recorded distance and bearing of British ships bombarding Puerto Argentino; later it was used for fire control of "do-it-yourself" Exocet systems).

Malvinas (Falklands) War: April 2–June 14, 1982

Argentine Armed Forces

Army

10th Infantry Brigade (8,500), 2d Infantry Brigade (1,300), 3d Infantry Brigade (1,675)

Navy

1 aircraft carrier, 1 cruiser (*sunk*), 6 destroyers, 3 frigates, 2 submarines (*1 captured*), 9 merchant vessels (*all lost*); naval attack air: 5 Super Etendards, 8 Skyhawks

Air Force

8 air brigades with A–4P Skyhawks, IAI Daggers, Mirage III–E fighters

Losses:

655 killed, 12,700 taken prisoner

British Armed Forces

Army

3d Commando Brigade, 5th Infantry Brigade (28,000 combat or combat support troops)

Royal Navy

2 aircraft carriers, 8 destroyers (*2 sunk*), 15 frigates (*2 sunk*), 1 ice patrol ship, 8 amphibious ships (*1 sunk*), 12 troop transports (*1 sunk*); naval air: 15 squadrons with 171 aircraft and helicopters

Royal Air Force

15 squadrons with Harriers, Vulcans, Hercules C–130 transports, Chinooks

Losses:

255 killed

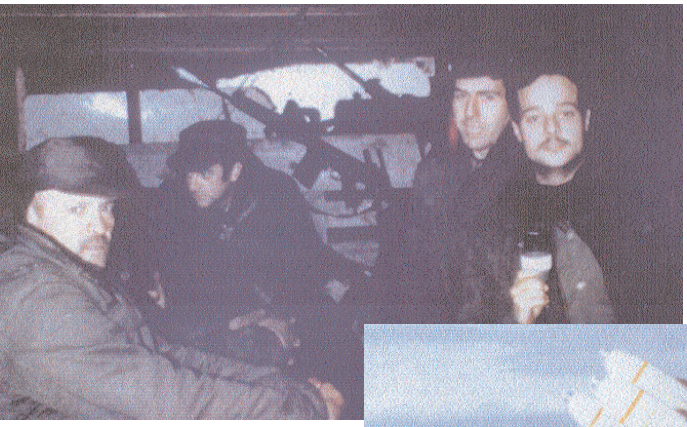
Sources: Brenda Ralph Lewis, "Unexpected War in the Falklands: Colonial War in the Missile Age," *Strategy and Tactics*, no. 103 (September/October 1985), pp. 37–43; Max Hastings and Simon Jenkins, *The Battle for the Falklands* (London: Michael Joseph, 1983), pp. 316–18; and Martin Middlebrook, *The Fight for the 'Malvinas': The Argentine Force in the Falklands War* (London: Penguin Group, 1989), pp. 282–83.

Juan Carlos Murguizur, a lecturer at the Argentine army staff college, laid bare the failure of jointness on the strategic level:

> *The armed forces were divided into watertight compartments, each service jealously guarding its rights and privileges, and their compulsory participation in the to and fro of national politics merely aggravated the situation.*
>
> *The so-called* Estado Mayor de Coordinacion, *or coordination staff, was responsible in theory for drawing up plans for joint-service operations, but in practice did very little. In military circles, this organization was referred to as "the pantheon" since it served as an elegant burial-place for senior officers too old for command posting but not yet old enough to be retired. Plans for joint service operations needed the approval of all three services; and the troops and equipment necessary had to be requested from the respective commanders, making it desperately hard to get around the time-consuming bureaucracy and interservice jealousy.*[5]

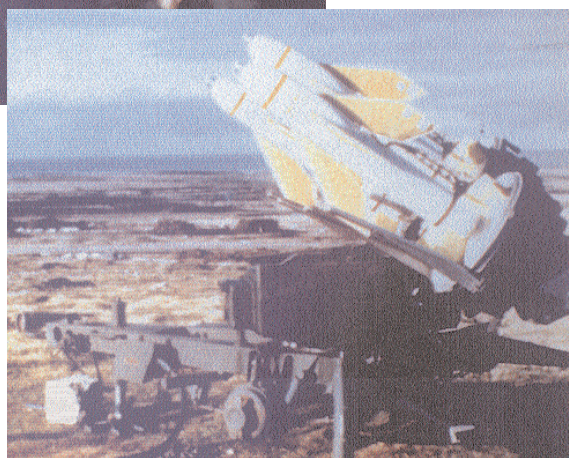
These findings should not surprise those who have studied Central and South America, for the history of that region shaped the identity of its military institutions, one that can be surrendered only with great difficulty. As elsewhere, the principal role of the soldier in Latin America is to defend the nation. But that role was pursued in ways which differed significantly from those of the military in the United States. The armed forces of Latin America found an identity in defining nationality as well as in defending it.

As Latin American nations gained their independence (most by 1824), many lacked a sense of identity. The monarchs of Spain, Portugal, France, Britain, and Holland had owned the region, and two of them, the kings of Spain and Portugal, ruled over the largest parts. Latin America was a huge area with isolated pockets of inhabitants. Almost impassable natural barriers—mountains, deserts, jungles, and rivers—reinforced this isolation and contributed to a lack of national identity. For example, Argentina was not united as a nation until 1853 even though it was among the first Spanish colonies to win independence in the 1800s. Also, colonial powers frequently fought each other and had little incentive in defining the boundaries of their empires. The King of Spain, who owned perhaps three-fifths of Latin America, was unconcerned over



(Carlos F. Ries Centeno)

Argentine soldiers, airmen, and marines taking cover during British air raid.



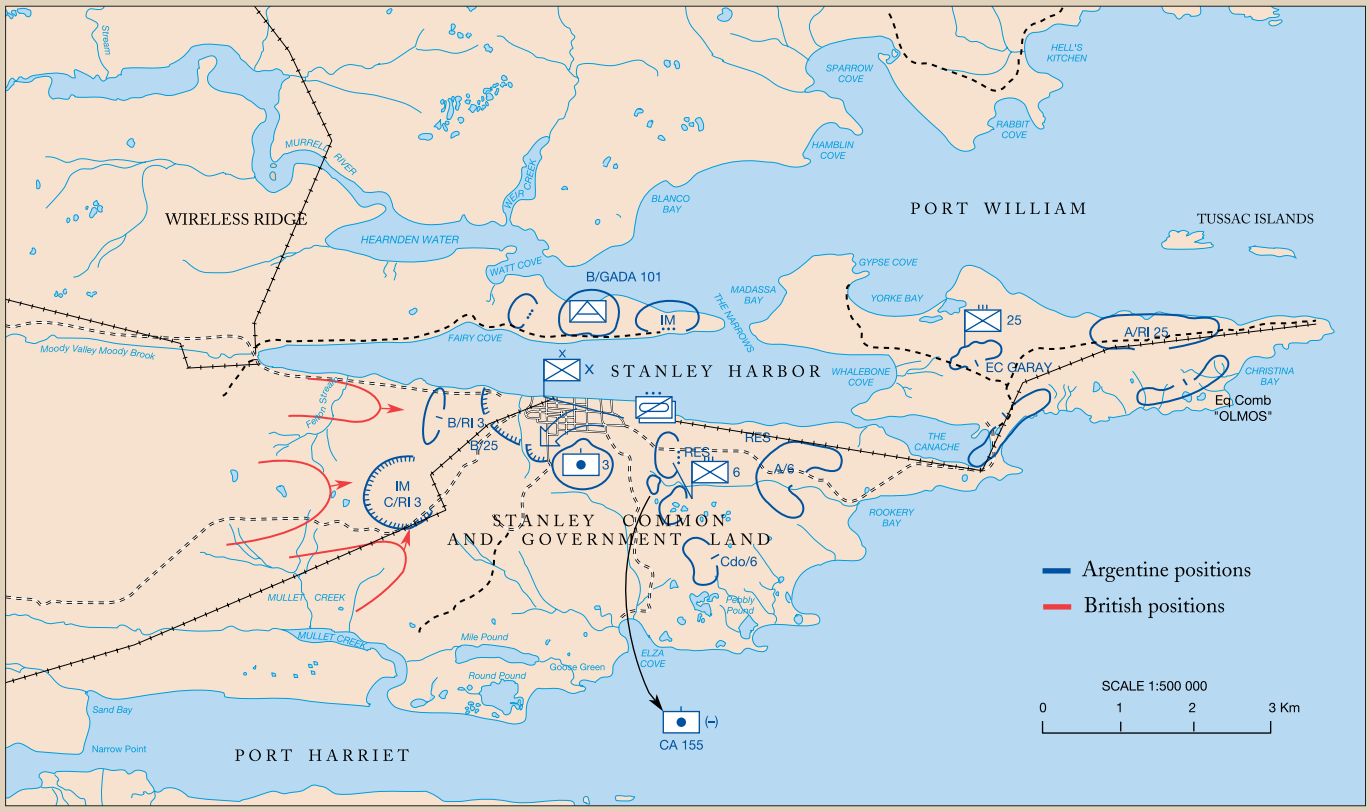
(Carlos F. Ries Centeno)

Tiger Cat SAM battery launcher near the Puerto Argentino airfield (this weapon was quite old and had limited range, and its missiles did not down any British planes).

boundaries which subdivided his many possessions. As a consequence the military of the region emerged not only as guarantors of sovereignty but also as creators and guardians of national identity.

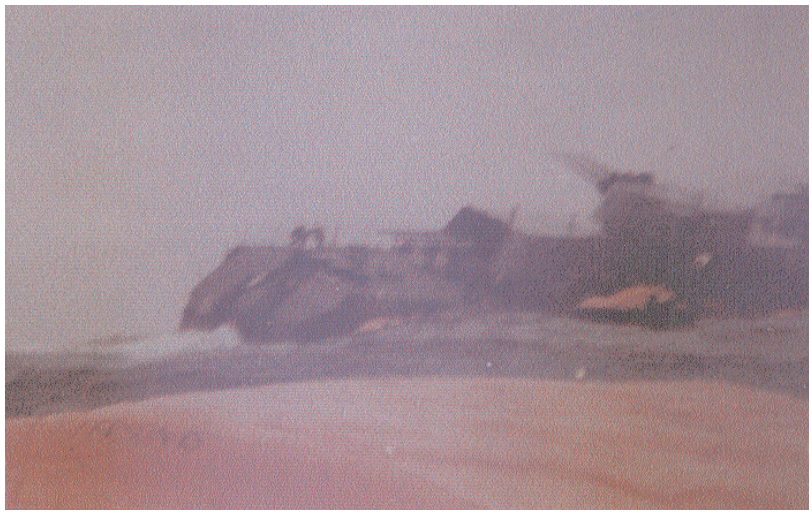
In preserving national identity, many Latin American military establishments evolved into closely knit institutions whose cohesion served to bond a larger but weaker national identity. But that cohesion within the military was achieved in part by creating loyalty to a service and its unique territorially-defined mission, and participating in an extensive and isolationist social infrastructure. The distinctive duties of the services traditionally found in Latin America—army, navy, air force, and federal police—reinforce this separateness and territoriality. These duties, traditionally implicit or at times explicit in Latin American constitutions, give the services separate, inviolable identities. While defending the nation, a service must act to define nationality. Consequently, one finds many examples in

Argentine and British forces, Puerto Argentino (Port Stanley), 1030 hours, June 14



Source: Informe Oficial Ejército Argentino, *Conflicto Malvinas*, vol. 2., Abreviaturas, Anexos y Fuentes Bibliográficas (Buenos Aires, 1983).

Photos taken with pocket camera by a senior officer of *General Belgrano* showing (1) main deck below bridge as crew pushes life-raft canister into water; (2) bow folded under by second torpedo hit (note "B" turret is swung starboard to test maneuverability without power); and (3) sea climbing over main deck on port side as list increases dramatically (note rafts standing near forward turrets relatively close to sinking vessel).



(Photos by Martin Sgut)

Latin America's past of a service acting to define the nation's political course.

Given this tradition it should not be surprising that the Argentine army, navy, and air force fought three wars against the British in the Malvinas. But one must understand that the Argentine view of service identity, as established and reinforced by tradition, is the greatest obstacle to joint activity, no matter how desperately circumstances press for such an innovation. For truly effective jointness, new institutional perspectives must evolve. That *unnatural* process takes time, vision, and commitment, for it must work against the forces of history and tradition. JFQ

NOTES

[1] Interview with Capitan de Fragata Jorge Colombo, who commanded the Super Etendard squadron (September 15, 1983).

[2] Interview with the Argentine navy's Malvinas analysis group on September 30, 1983; interview with Contra Almirante Eduardo Otero, who commanded Naval Forces Malvinas (September 8, 1982).

[3] Interview with Capitan de Fragata Julio Pérez, who was in charge of the special detachment responsible for the installation of the Exocet in the Malvinas (September 9, 1982).

[4] Centro Ex-Combatientes Malvinas—La Plata, *Informe Rattenbach: El drama de Malvinas* (Buenos Aires: Ediciones Espáraco, 1988), pp. 204, 274.

[5] Juan Carlos Murguizur, "The South Atlantic Conflict: An Argentine Point of View," *International Defence Review*, vol. 16, no. 2 (February 1983), pp. 135–36.

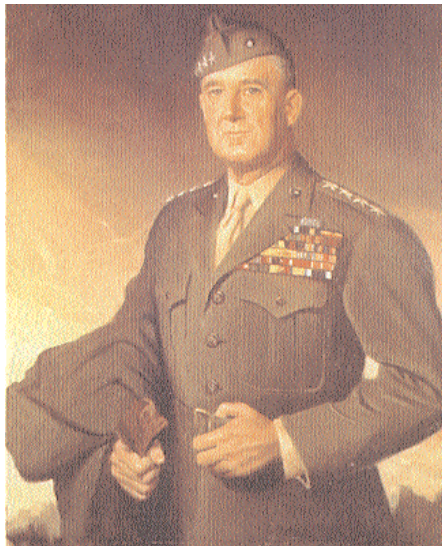
General Alexander A. Vandegrift, USMC

(1887–1973)

Commandant of the Marine Corps

VITA

Born in Charlottesville, Virginia. Graduated from University of Virginia; commissioned (1909). Attended Marine Officers' School, Port Royal, South Carolina. Assigned to Marine barracks, Portsmouth, New Hampshire. Participated in capture of Coyotepe, Nicaragua, and occupation of Vera Cruz, Mexico. Assigned to 1st Brigade and participated in action against Cacos bandits at LeTrou and Fort Capois, Haiti (1914). Member of Haitian Constabulary at Port-au-Prince; served with *Gendarmerie d'Haiti* as inspector of constabulary (1916–19). Assistant chief of staff, Marine Corps base, San Diego (1926); operations and training officer, 3d Brigade, Tientsin, China (1927). Assistant chief coordinator, Bureau of Budget (1928). Assistant chief of staff, G–1 section, Fleet Marine Force, Quantico. Commanding officer, Marine detachment, American Embassy, Peiping, China (1935). Assistant to Major General Commandant, Headquarters Marine Corps (1940). Detached to 1st Marine Division prior to outbreak of World War II (1941). First commanding general to leave U.S. shores to lead 1st Marine Division; reinforced in Solomon Islands (1942). Received Medal of Honor during defense of Solomons (1942). Assumed command of 1st Marine Amphibious Corps; commanded landing at Empress Augusta Bay, Bougainville (1943). Returned to Washington as Commandant-designate; sworn in as 18th Commandant (1944–46). First Marine Corps officer on active duty to attain four-star rank (1945). Died at Bethesda, Maryland.



U.S. Marine Corps Museum

Portrait of General Vandegrift by Bjorn Egeli.

HEADQUARTERS, FIRST MARINE AMPHIBIOUS CORPS
IN THE FIELD

15 October, 1943.

MEMORANDUM TO: All Hands.

1. The forward movement of our enemy in the Pacific has been stopped. More recently he has been forced to give up, at great cost in men and material, positions of great value to his campaign. His ships no longer appear in great force in these waters, his aircraft is becoming more cautious, and many of his soldiers and sailors admit they are no match for us. Nevertheless, he will fight desperately for his last hold in the Solomons.

2. The First Marine Amphibious Corps, composed of fighting men of the United States and of New Zealand, has been chosen to drive him completely out of the Solomons. It will not be an easy task but, as in the past, our squads can give and take punishment better and longer than his squads. This we are prepared to do. Our supporting air and naval forces are prepared to strike him with vastly greater blows than ever before. The first of these blows has already been delivered.

3. It has been my privilege to assume command at this time. The day is set and we are ready. Be alert, and when the enemy appears, shoot calmly, shoot fast, and shoot straight.

A.A. VANDEGRIFT,
Lieutenant General, U.S. Marine Corps,
Commanding.

Roles, Missions, and Functions: Terms of Debate

By DANIEL T. KUEHL *and* CHARLES E. MILLER

The terms *roles, missions,* and *functions* are often used interchangeably to refer to a single concept. To many the terms are virtually synonymous: they all mean "what the services do." In one sense that is true. But they also have finite and statutory meanings which stem from what the services do and who makes the assignments. As Congress and the services begin what promises to be an intense and possibly contentious look at roles, missions, and functions,[1] it is helpful to review the origin and usage of these terms as well as prospects for reallocating what they signify.

Terms of Art

Roles date from the National Security Act of 1947 which set out the basic purpose of each service.[2] The Air Force was to be "organized, trained, and equipped primarily for prompt and sustained offensive and defensive air operations."[3] Title 10, U.S. Code, currently contains the same statement for the Air Force as well as similar ones for the other services. Essentially, roles establish each service's primacy in its respective form or arena of war: land, sea, or air.

Missions date from the Department of Defense Reorganization Act of 1958 which designated commanders of unified and specified commands as *combatant commanders* (CINCs) directly responsible to the President and Secretary of Defense. The job of carrying out broad operational missions now belonged to joint organizations and not to the services which became in effect force providers for CINCs. The missions of the combatant commanders, however, should not be confused with those of the individual services.

Functions also date from 1947 when President Truman issued an executive order on the "Functions of the Armed Forces."[4] They include those various activities, operations, and capabilities for which the services were responsible and for which they were charged with the "organizing, training, and equipping" of forces. The Air Force, for example, had seven functions:

- air operations (including joint operations)
- general air supremacy
- local air superiority
- strategic air operations (including reconnaissance)
- airlift and support for airborne operations
- air support for land and naval forces
- air transport.

Less than a year after Truman's executive order was issued, the Key West agreement[5] listed service functions in greater detail and distinguished between primary and collateral functions as illustrated by the following list of Air Force functions:[6]

primary

- gain/maintain air superiority
- air defense of the United States
- strategic air warfare
- interdiction of enemy land power and communications
- close combat and logistical air support
- intelligence (including tactical intelligence) and aerial photography
- airlift, air transport and resupply, and support for airborne and amphibious operations

collateral

- interdict enemy sea power
- antisubmarine warfare and shipping protection
- aerial minelaying.

Air Force operations during World War II provided notable examples of each of these functions.

The legal basis for functions is found in DOD Directive 5100.1 which specifies 17 primary functions, 4 collateral functions, 4 responsibilities concerning space, and 4 responsibilities relating to combat operations in support of other services which are assigned to the Air Force (those of the other services are equally detailed). The following list summarizes the functions of the Air Force:[7]

primary

- air combat operations
- air and missile defense and space control
- strategic air and missile operations
- joint amphibious, space, and airborne operations
- support of the Army—close air support (CAS), logistics, airlift, resupply, aerial photography, tactical air reconnaissance, and interdiction
- aerial imagery
- space launch and space support
- aerial tanker operations
- air lines of communication
- special operations and psychological operations
- electronic warfare

collateral

- sea surveillance and antisurface ship warfare
- antisubmarine warfare
- aerial minelaying
- aerial refueling in support of naval campaigns

Daniel T. Kuehl teaches in the School of Information Warfare and Strategy, Information Resources Management College, National Defense University; Colonel Charles E. Miller, USAF, is chief of the Strategic Planning Division at Headquarters, U.S. Air Force.

responsibilities in support of space

▼ organize, train, equip, and provide space forces
▼ develop tactics and techniques for space operations
▼ exercises involving space force
▼ participate with other services in joint space operations, training, and exercises

responsibilities in support of combat operations by other services

▼ amphibious and airborne operations and procedures
▼ CAS.

Institutional Debate

One result of examining service functions is an apparent overlap which commonly is seen as duplication. For example, the Navy and Marines are both assigned the function of prosecuting electronic warfare, as are the Army and Air Force. Each service is therefore authorized to expend resources and develop forces to prosecute electronic warfare. Even though this is accomplished from the relatively unique perspectives of individual services, areas of warfare overlap are inevitable. The military planner sees this as a prudent hedge and a provision of complementary capabilities to defeat complementary threats; outside observers probably see it as typical Pentagon waste. When the public hears that the F–4G, EF–111, and EA–6B all perform an electronic warfare mission, they may assume that this reveals redundancy that warrants cutting fat to realize savings, and usually no explanation, however elaborate, that the three aircraft perform significantly different parts of the electronic warfare mission will allay their criticisms.

The complexity of the situation is exacerbated by lines of authority which are not as clean as commonly believed. Congress assigns roles in the respective arenas of war (that is, land, sea, and air) while the executive branch (the President through the Secretary of Defense) assigns detailed functions and authorizes the development of forces to carry them out. But the services do not employ these forces, CINCs do in order to accomplish the missions assigned to them by the President and Secretary of Defense. This places the human beings who carry out the functions and missions in a bit of a quandary since they are responding to two different lines of authority, one running to the service secretaries and military departments and a *mission* line running through CINCS to the Secretary of Defense and President. To recapitulate: services develop forces but do not employ them, while combatant commands, under joint doctrine, employ forces but do not develop them. To make matters worse, the services then overlay this process with their unique doctrines, and when services allude to missions they are almost always referring to their doctrinal missions, not to those of combatant commands.

The current debate on roles and missions is occurring in an era of congressionally-driven emphasis on jointness. The Goldwater-Nichols Department of Defense Reorganization Act of 1986 requires the Chairman of the Joint Chiefs of Staff (CJCS) to review the "assignment of functions (or roles and missions)" of the Armed Forces. Two such reviews have been carried out to date, one by Admiral William Crowe in 1989 (which was delivered only two days before his term expired) and another by General Colin Powell in 1993. Both reports have been criticized for recommending what some consider to be only marginal changes.[8] Crowe stated that service roles were "fundamentally sound," but that their functions should be revised to reflect current strategy, new technology, and changing threats to national security. He made four specific recommendations within the context of a suggested revision of DOD Directive 5100.1:[9]

▼ a report on roles and missions should be required every two years
▼ reports should delineate service functions with greater precision and clarity
▼ CAS should be a primary function of each service
▼ the Air Force should have primary responsibility for space functions.

General Powell's final report visited the following specific issues:[10]

▼ a joint headquarters for U.S.-based forces
▼ assigning space to STRATCOM
▼ four air forces
▼ best mix of aircraft for interdiction
▼ realigning the CAS mission
▼ eliminating/reducing Marine air wings
▼ consolidating flight training
▼ who should perform combat search and rescue (CSAR)?
▼ duplication of multi-service jammer and electronic intelligence (ELINT) aircraft
▼ further reduction of U.S. forward deployments
▼ duplication of Army and Marine expeditionary capability
▼ who should perform theater air defense (TAD)?
▼ further restructuring of intelligence organizations
▼ active and Reserve component mix.

Congressional Action

This debate now features a congressionally-mandated Commission on Roles and Missions of the Armed Forces (see The Joint World in this issue of *JFQ* for details). The commission is the result of new considerations such as the end of the Cold War, fiscal constraints, and perhaps most importantly a congressional perception that the two CJCS reports were not comprehensive and thus the Armed Forces need impetus from outside to reform. Key issues that the commission will examine are duplication of effort, improvement in interoperability and military effectiveness, gaps in mission coverage, and the impact of advanced technology. The commission's charter virtually assures that its recommendations will be unsettling to the existing structure of roles, missions, and functions. Questions that the commission is likely to take up include:

▼ do we need two (Army/Marine) expeditionary ground forces?
▼ how many air forces do we need?

▼ does everyone need to perform CAS as a primary function?

▼ who should defend aerospace (from ground into space)?

▼ sea-based versus land-based aerial power projection

▼ duplication of helicopter forces and capabilities

▼ duplication of other operational functions (reconnaissance, electronic warfare, et al.)

▼ duplication of intelligence functions

▼ consolidated training, logistics, and support services

▼ new post-Cold War missions such as peace operations, et al.

▼ new functionally-based services (special operations, space, et al.).

If Carl Builder is correct in his analysis that the services possess almost human instincts for self-preservation, the evolving roles and missions debate could be contentious in a manner unseen since the so-called "Admirals' revolt" of 1949. Given the synergistic influences of an unsettled and murky geopolitical situation, a declining budget whose low point has not been reached, and threats to institutional relevance and survival, the upcoming debate has real potential for becoming a bureaucratic back-alley fight.

Arenas of War

Uncertainty over roles and missions and decades-old bureaucratic jockeying for position is probably inevitable; perhaps the problem is that technology has outstripped the ability of existing organizations to effectively and efficiently enfold new technologies. When the National Security Act of 1947 created the existing organizational structure there were three arenas of warfare: land, sea, and air. With the turn of the century—indeed the end of a millennium—new and evolving arenas are influencing not only how forces are organized, trained, and equipped, but also their very missions. The ubiquity of electronic warfare suggests that the electromagnetic spectrum is a new arena which must be dominated to be successful militarily. Space is another arena, more familiar perhaps than electronic warfare since space, at least, is a physical medium in which objects move and can be seen and acted on. If futurists are correct, information-processing technologies—what some call cyberspace—might be another arena of war that must be dominated to maintain national security and be victorious in future battles. Even a simple listing of current and potential arenas suggests a radical change in the way we think about service roles and missions:

current arenas of warfare

▼ land—Army

▼ sea—Navy

▼ amphibious—Marine Corps

▼ air—Air Force

potential arenas of warfare

▼ space

▼ electromagnetic spectrum

▼ cyberspace-information warfare

▼ peace operations—peacekeeping and peace enforcement.

Current scrutiny of overlapping missions and duplication of capabilities among the services may, in fact, be small potatoes when compared to the significant changes in roles, missions, and functions in the future. Issues such as evolving arenas of war may actually pose much more disruptive challenges to the way the Armed Forces "organize, train, equip, and employ" in the next century. A service with vision—and that is both intellectually and organizationally ready to grasp "God's coattail" (as Otto von Bismarck quipped)—will be the best placed to be militarily dominant when the future is *now*. JFQ

NOTES

[1] For example, see Theresa Hitchens and Robert Holzer, "Air Force, Navy Dispute Roles Amid DOD Study," *Defense News*, March 7–13, 1994, p. 4.

[2] While this article uses the Air Force to illustrate specific roles and functions, it does not intentionally seek to promote the roles and functions of one service over those of others.

[3] See Richard I. Wolf, *The USAF: Basic Documents on Roles and Missions* (Washington: Office of Air Force History, 1987), document 7, Public Law 253 (July 26, 1947), which is better known as the National Security Act of 1947, p. 76.

[4] Ibid., document 5, Executive Order no. 9877 (July 26, 1947), p. 90.

[5] See also Barry M. Blechman, et al., "Key West Revisited: Roles and Missions of the U.S. Armed Forces in the Twenty-First Century," report no. 8 (Washington: Henry L. Stimson Center, March 1993), p. iii.

[6] *Primary* functions authorize a service to develop force structure to accomplish them and *collateral* functions pertain to activities in support of other services and, in effect, have to be taken "out of hide"; ibid., document 7, "Key West Agreement" (April 21, 1948), pp. 163–64.

[7] Department of Defense Directive 5100.1, "Functions of the Department of Defense and its Major Components," September 25, 1987, pp. 19–21.

[8] See General Accounting Office, "Roles and Functions: Assessment of the Chairman of the Joint Chiefs of Staff Report" (Washington: General Accounting Office, July 1993); see also Stephen C. LeSeuer, "Congress Forces Roles Issue," in *Defense News*, November 27, 1993, pp. 3, 27.

[9] William J. Crowe, Jr., memorandum for the Secretary of Defense, subject: "Report on Roles and Functions of the Armed Forces," dated November 2, 1989, pp. 15, 19–22.

[10] Colin L. Powell, *Report on the Roles, Missions, and Functions of the Armed Forces of the United States* (Washington: Joint Chiefs of Staff, February 1993), pp. xxii–xxx.

[11] LeSeuer, "Congress Forces Roles Issue," p. 3.

[12] Carl H. Builder, *The Masks of War: American Military Styles in Strategy and Analysis* (Baltimore: Johns Hopkins University Press, 1989), pp. 27–30.

[13] For an account of this event, see Philip S. Meilinger, "The Admirals' Revolt of 1949: Lessons for Today," *Parameters*, vol. 19, no. 3 (September 1989), pp. 81–96.

Planning for War: A System

By RICHARD W. GOODALE, JR.

As the defense establishment adapts in the wake of the Cold War, war plans and the system used to develop them must also adapt. A few years ago war plans—known as a global family of plans due to their impact and interrelationships—were structured to meet the now defunct Soviet threat. The system that generated them was ponderous, producing huge plans in exacting detail for moving large forces to forward theaters.

Besides fighting major regional conflicts, however, the emerging national security strategy anticipates new uses for the Armed Forces—deploying on short notice, on unanticipated missions, with smaller forces anywhere in the world for operations other than war. In addition to continuing requirements to conduct noncombatant evacuation operations, new missions include peacekeeping, peace enforcement, disaster relief, and humanitarian assistance. As missions evolve so too must the planning system. Planning must be visionary, quick, flexible, and adaptive. To achieve that end we must understand the architecture of the planning system and on-going initiatives to improve that antiquated apparatus.

A Confusion in Terms

The members of the Joint Planning and Execution Community (JPEC) practice a somewhat arcane art that is understood only by those who master its unique vocabulary. The terminology, like any technical language, facilitates communication among the members of the community, but it often excludes the uninitiated from exercising a proper role in monitoring the planning process.

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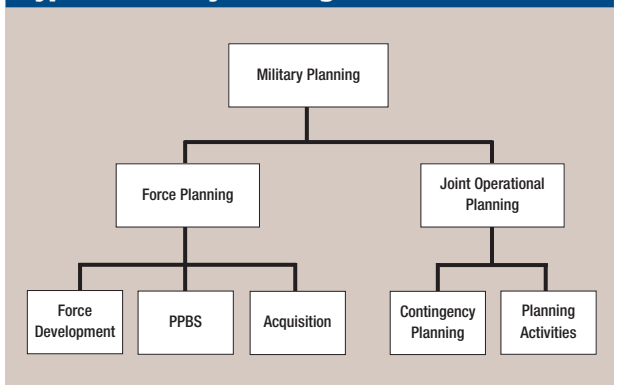
To help dispel the fog and grasp the changes taking place, we must first examine the types of planning and how the pieces of the puzzle fit together.

Various types of planning are related in a hierarchy under the rubric of military planning. According to emerging doctrine (see Joint Pub 5–0, *Doctrine for Planning Joint Operations*), planning for employing forces is " . . . performed at all echelons throughout the range of military operations from operations other than war to war." Thus war planning is developing in support of national security strategy. This wider perspective is found on the second tier of planning and has two components, *force planning* and *joint operational planning*.

Types of Military Planning



Force planning involves creating and maintaining "military capabilities such as organizing, training, equipping, and providing forces for assignment to combatant commands." Driven by the Planning, Programming, and Budgeting System (PPBS), it is the responsibility of the military departments and services. *Joint operational planning* entails "the employment of military forces to support a military strategy and attain specified objectives" and—under the Joint Strategic Planning System (JSPS)—the primary responsibility of the Chairman of the Joint Chiefs of Staff (CJCS) and commanders in chief (CINCs). The operational planning element on the second tier deals with a more germane, warfighting-related part of the puzzle. "Contingency planning is the development of plans for potential crisis involving military requirements that can reasonably be expected in an area of responsibility (AOR)."

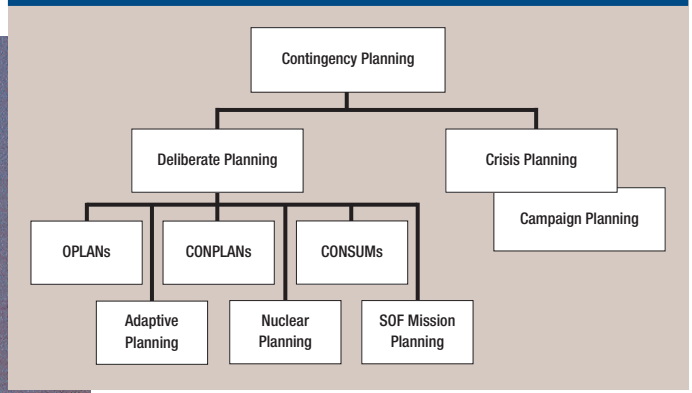
Contingency Planning

The joint operational planning framework is the starting point for contingency planning. "Joint operational planning includes contingency planning—preparation of joint operation plans by the combatant commanders—as well as those joint planning activities that support the development of contingency plans." The activities include mobilization, deployment, employment, sustainment, and redeployment of forces. Contingency planning, however, becomes the focal point of the third tier of military planning. It is "the development of plans for potential crisis involving military requirements that can reasonably be expected in an AOR."

Contingency planning spans the full range of military operations under deliberate or crisis action conditions. These conditions establish the basis for two more types of planning—*deliberate* and *crisis action*. The center of gravity in this framework should be deliberate rather than crisis action planning. The latter occurs when an operations staff element adapts the existing deliberate plan.

U.S. Navy (John Leenhouts)

Types of Contingency Planning



Therefore, to be of value deliberate plans should become a baseline for developing a crisis response. "The deliberate planning process supports methodical, fully coordinated, and complex planning by the entire [JPEC]."

Deliberate Planning

Deliberate planning is a process for developing plans in peacetime under the Joint Operation Planning and Execution System (JOPES), the dreaded *J-word*. It uses automatic data processing (ADP) tools that are often criticized. JOPES is complicated, detailed, time consuming, and not crisis-oriented. It is important to stress, however, that it provides policies and procedures for deliberate planning that are common and useful to planners. CINCs, services, combat support agencies, and the rest of JPEC need an interoperable system to support the warfighter developing and disseminating planning information.

"The deliberate planning process supports methodical, fully coordinated, and complex planning by the entire [JPEC]." This process is unlike crisis action planning, which is also a JOPES process which entails the rapid development of operation orders for responding to crises. The deliberate planning process focuses on deployment, sustainment, and redeployment and serves as the baseline for transition to crisis action planning.

Confusion surrounding the puzzle is attributed to other aspects of deliberate planning, some new, some old. They include adaptive planning, adaptive joint force packaging, nuclear planning, and Special Operations Forces (SOF) mission planning, and are subsets of deliberate planning.

Adaptive planning is a concept delineated in planning guidance by CJCS and CINCs. This guidance tasks CINCs with developing flexibility in deliberate plans in order to apply them, with some modification, to unforeseen or unexpected contingencies in crisis action planning. Adaptive planning assists in laying the groundwork for future crisis management. By applying this concept, CINCs consider various likely or possible crisis responses for incorporation in deliberate plans. For example, flexible deterrent options (FDOs) are considered in deliberate planning for peacetime situations and circumstances involving regional instability, to rapidly deter or forestall a crisis.

Adaptive joint force packages (AJFPs) are based on another deliberate planning concept that was developed by the Commander in Chief, Atlantic (CINCUSACOM), and approved by CJCS. As joint force integrator, CINCUSACOM is building standard CONUS-based joint force packages to meet the needs of supported CINCs. The concept calls for tailoring the packages to meet specific military capabilities.

Conceptually, AJFPs are similar to a JOPES function, namely, developing a force module (or combat unit building blocks with associated combat support elements, combat service support elements, and sustainment) as well as Time-Phased Force Deployment Data (TPFDD) packages. But there is a difference between AJFPs and force modules: the former are specifically trained as joint teams for rapid delivery to meet the needs of supported CINCs while the latter are not.

Non-strategic nuclear planning is another part of deliberate planning. It follows a JOPES process to develop nuclear options in support of CINC operation plans (OPLANs). Similarly, SOF mission planning produces deliberate plans for employing SOF when directed by the National Command Authorities (NCA) and CJCS. All of the above pieces enhance a proactive approach to deliberate planning and assist in developing an adaptive and quick response to crises. According to Joint Pub 1, *Joint Warfare of the U.S. Armed Forces*, "Campaign planning represents the art of linking battles and engagements in an operational design to accomplish strategic objectives."

Campaign Planning

Frequently equated to deliberate planning, "Campaign planning represents the art of linking battles and engagements in an operational design to accomplish strategic objectives." This reflects the doctrine developed in Joint Pub 3–0 and guides employing forces when conflict is imminent. Campaign planning includes "the need to plan for related, simultaneous, and sequential operations and the imperative to accomplish strategic objectives through these operations."

Campaign plans are not a formal part of JOPES. While deliberate plans require adaptive planning with alternatives for a contingency, campaign plans focus on clearly defined objectives. "Campaign planning is done in crisis or conflict (once the actual threat, national guidance, and available resources become evident), but the basis and framework for successful campaigns is laid by peacetime analysis, planning, and exercises." For this reason, campaign plans are not normally created until the execution planning phase of crisis action planning.

Based on the campaign plan, appropriate elements then translate into the operation order (OPORD) format of JOPES for execution. Campaign planning therefore diminishes as the scale of contemplated operations and the imminence of hostilities decrease. A CINC, however, develops courses of action for the campaign plan based on existing OPLANs and operation plans in concept format (CONPLANs), if potential conflicts were adequately anticipated in deliberate planning.

The characteristics of campaign plans that have not been part of JOPES-structured plans include a commander's strategic, operational, and tactical intent; identification of enemy strategic, operational, and tactical centers of gravity with guidance at the macro-level for defeating them; identification of friendly strategic, operational, and tactical centers of gravity as well as guidance at the macro-level to protect them; and operational phasing (viz., pre-hostilities, lodgment, decisive combat and stabilization, follow-through, and post-hostilities, per Joint Pub 3–0) which includes a commander's intent and guidance to component commanders for each phase. Campaign plans can and should be created in peacetime for certain set-piece environments (such as Korea where the mission, forces, and centers of gravity are clearly defined).

DOD

Military Photography (Greg Stewart)

Deliberate Planning Problems

There are some problems with the current deliberate planning system that lead to arguments for eliminating or changing the system. One problem is that TPFDD development takes too long and is not crisis oriented, provided that deliberate planning is supposed to facilitate rapid transition to crisis response. It is not unusual to see a single TPFDD development cycle take 18–24 months or longer given the various refinement conferences, on-going service reorganizations with resultant changes to databases, and high priority diversions of planning staffs by contingency operations.

Additionally, TPFDD development involves overly detailed planning, often with outdated force structure, and depends on complicated ADP support using old technology. The complexity of ADP demands that deliberate planners who are familiar with the TPFDD development become involved early in the crisis response. It is this complexity that inadvertently causes crisis execution to lag behind the decisionmaking process.

A related problem alluded to above is that many standard database reference files describing unit deployment requirements and maintained by the service components are out of date because of labor-intensive maintenance of TPFDDs and the scarcity of TPFDD-skilled personnel.

Another criticism is that joint doctrine for deliberate planning focuses solely on deployment and sustainment. The deliberate planning process does not emphasize the employment aspects of tactical and operational planning highlighted in campaign planning. So deliberate plans cannot be pulled off the shelf and executed, something that was never intended. Operation orders are created (OPORDs) from OPLANs for execution. We do not execute OPLANs, we implement them.

Deliberate Planning Advantages

In spite of drawbacks, the deliberate planning system has advantages. First, it establishes policies and procedures for planning by all the combatant commanders, component commanders, services, and combat support agencies. Having a well founded and frequently utilized system in place provides a baseline for crisis action planning. As General Norman Schwarzkopf noted in the lessons learned from Operations Desert Shield/Desert Storm: "The process of developing combined operation plans is at least as important as the actual plans that are produced." His statement is similar to Moltke's observation that: "Plans are nothing, but planning is everything."

Second, deliberate planning fosters a cadre of operational and logistical planners and ADP support personnel trained and experienced in deploying and sustaining forces. Deliberate planning allows JPEC to develop processes, procedures, and planning expertise that is essential in crisis action planning. These experienced planners help minimize the chaos during large deployments at the onset of crises.

A third advantage of deliberate planning, sometimes considered a disadvantage by planning staffs, is the preparation of a multitude of associated JOPES annexes and appendices. This forces planners to develop "how to" documents at combatant command level for specific combat support functions that are handled as routine operating procedures at tactical level. An example is logistics. At tactical level units rely on standing operating procedures (SOPs) for logistic support functions and simply refer to those SOPs in OPORDs. Tactical air control, medical evacuation, command, and signal are other examples. Despite joint doctrine, joint staffs do not have SOPs for these types of theater support operations. Preparing annexes and appendices compels a staff to find the ways to accomplish these aspects of joint warfighting that would be almost impossible to develop in a timely fashion during a crisis.

U.S. Navy (John Kristoffersen)

U.S. Army (Gary Bryant)

Deliberate planning also serves as a common reference point for JPEC responses to crises. The development process involves significant critical and creative thought as well as coordination within the planning community that is invaluable in the course of action development. The report to Congress on *Conduct of the Persian Gulf War* stated: "As with all plans, some modifications were made to account for circumstances unique to the crisis. Modification was done with relative ease compared with requirements of starting operations without a base document."

One CINC recently iterated this point in a message about the deliberate planning process:

It would be a monumental task to develop a complex campaign plan for a major regional contingency during a period of crisis without any prior planning. In the deliberate planning process (i.e., the calm before a crisis onset), many crucial issues are debated and decisions reached. These critical decisions include forces apportioned versus plan requirements, command and control relationships, logistics sourcing, force movement tables, pre-conflict actions, coalition building, and host nation support requirements. All of these issues are specific and unique to each OPLAN and must be predetermined, on the shelf, and ready for immediate execution.

Lastly, deliberate planning provides a link to JSPS to help meet Title 10 obligations. CJCS is responsible for developing contingency, joint mobility, and logistic plans; analyzing deficiencies and strengths in military capabilities; evaluating preparedness to accomplish assigned missions; and identifying contingency planning risks and shortfalls. All these aspects complement the defense planning requirements and PPBS alluded to earlier.

Deliberate Planning Improvements

Various initiatives offer remedies to deliberate planning problems. The focus on flexibility, responsiveness, and adaptability to

crisis action planning includes AJFPs, the Technical Insertion Program (TIP), the Global Command and Control System (GCCS), and doctrinal changes. While AJFPs are still under development, they enhance the transition to crisis response by using highly skilled, rapidly deliverable forces fully capable of operating as a joint team. The initial AJFPs will reflect collaborative efforts in deliberate planning between CINCUSACOM and supported CINCs for military operations short of war. ACOM will also continue to plan for the deployment of CONUS-based forces required by supported CINCs for major regional contingencies.

DOD

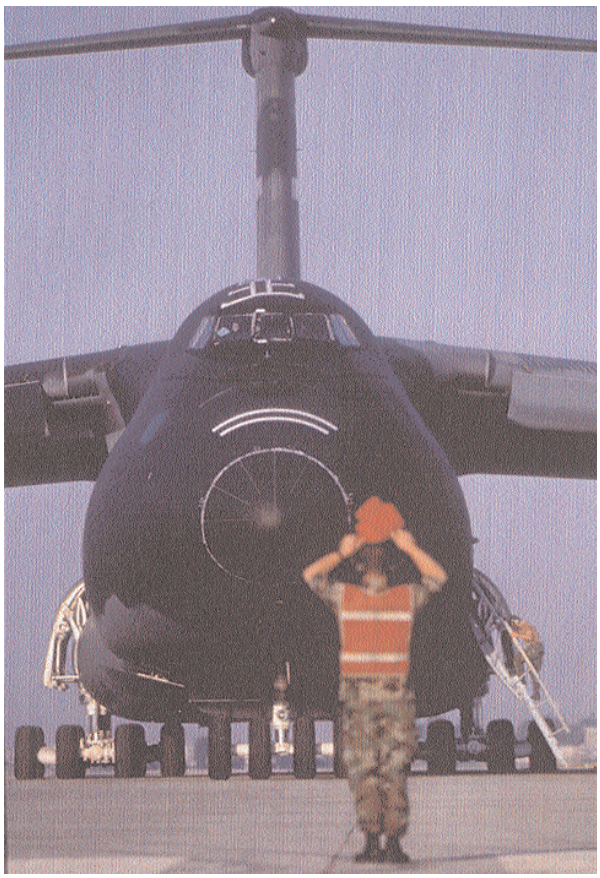
TIP was instituted on termination of the Worldwide Military Command and Control System (WWMCCS) ADP Modernization (WAM) program. TIP speeds TPFDD development, enhancing crisis action planning. It allows operations and logistics planners to work concurrently rather than sequentially in building TPFDD. Also, TIP transportation model applications, Dynamic Analysis and Planning Tool (DART), and Joint Flow Analysis System for Transportation (JFAST) provide a quick evaluation of lift requirements.

TIP bridges JOPES ADP and future GCCS. As GCCS evolves it should incorporate all the functionality of JOPES. Although still in its development stage, GCCS should resolve many current ADP support problems associated with deliberate planning.

As planning evolves emerging doctrine will offer a remedy to inherent planning shortfalls in employment guidelines for deliberate plans, particularly OPLANs. Proposed changes to JOPES pubs provide for incorporating selected campaign planning elements to clarify employment aspects of OPLANs.

While service component and joint force commanders normally do detailed employment planning for the actual use of forces, a certain level of detail at theater level serves a valuable role by communicating a CINC's purpose, requirements, and objectives. Since NCA needs deliberate plans the level of detail is important. By including selected campaign plan elements in deliberate plans CINCs provide NCA and CJCS information for inter-theater coordination and decisions at national level.

Current proposals call for JOPES to incorporate the following items in deliberate planning: a CINC's strategic, operational, and (if appropriate) tactical intent; identification of an enemy's strategic, operational, and tactical centers of gravity to include theater-level guidance for defeating them; identification of friendly strategic, operational, and tactical centers of gravity and theater-level guidance for protecting them; and phasing to reflect operations and conditions accomplished during prehostilities, lodgment, decisive combat (plus stabilization), follow through, and posthostilities (including redeployment). These amendments would ensure a clearer understanding of a CINC's concept of operations by all parties tasked with a supporting role.



Combat Camera Imagery (Brett K. Snow)

In sum, those who question deliberate planning are right, the process does have significant problems. But by and large JPEC recognizes this fact and is working to fix the problems. Some remedies such as AJFPs provide enhancements in the near term. Others, like GCCS and changes in doctrine, will take longer. Given the complexity of the problems the rate at which the process is being improved is probably about right. JFQ

Joint Doctrine: New Pubs, Old Controversies

By MICHAEL LEURS

There have been many changes in doctrine since the Goldwater-Nichols Act of 1986 made the Chairman of the Joint Chiefs of Staff (CJCS) singularly responsible for "developing doctrine for the joint employment of the Armed Forces." The following discussion treats some changes that have attracted the most attention within the Armed Forces.

Fire Support Coordination Line

The significant change relating to fire support coordination lines (FSCL) in Joint Pub 3–0, *Doctrine for Joint Operations*, is the requirement for forces attacking beyond the FSCL to "inform all affected commanders in sufficient time to allow necessary reactions to avoid fratricide, both in the air and on the ground." Ground, Special Operations Forces (SOF), and maritime commanders are informed of Joint Force Air Component Commander (JFACC)/Air Force operations beyond the FSCL by the Air Tasking Order (ATO). For ground commanders, the implication is that tactics or procedures for artillery or helicopter units to inform SOF and air components in a joint force about attacks beyond the FSCL will need to be developed and promulgated in appropriate publications. This work is just beginning.

Areas of Responsibility

Discussions leading to the approval of Joint Pub 3–0, *Doctrine for Joint Operations*, and the latest draft of Joint Pub 0–2, *Unified Action Armed Forces* (UNAAF), caused what some reckon is the joint equivalent of the statement by the first astronaut to set foot on the moon: "One small step for a man, a giant leap for mankind." The change is that only a joint force commander (JFC) will have an area of responsibility (AOR). Army and other component commanders in the joint force no longer have AORs but areas of operation (AOs) instead. The intent of the change is to expand and enhance jointness by making clear that only a JFC has an area of responsibility because only a JFC is *responsible for* (and has authority over) all operations within an area assigned. In reality, this does not represent an actual change in doctrine—it only acknowledges jointness. In the past an Army component commander has not routinely been responsible for all SOF action or air strikes within the Army AO and this remains the case. A land component commander, for instance, has generally not requested nor been responsible for conducting the following categories of operations when they happened to be located in the land AO: SOF operations to destroy key national enemy command and control facilities and remove documents, or air strikes against strategic targets, naval targets, airfields, air defense system facilities, or logistic facilities such as aviation fuel pipelines. The land commander must be informed about such operations in the AO and will always control those which are short of the FSCL to minimize fratricide and other impacts on ground operations.

Joint Force Air Component Commander

There are some recent changes associated with the Joint Force Air Component Commander (JFACC) concept and some lingering controversies. A CJCS paper entitled "A Doctrinal Statement of Selected Joint Operational Concepts" that was approved in November 1992 contained a number of statements about JFACC. It reaffirmed guidance first promulgated in the 1986 version of Joint Pub 3–01.2, *Joint Doctrine for Theater Counterair Operations*, that JFCs would normally designate JFACCs. Like all functional components, JFCs must specify the responsibilities of JFACCs. The Chairman provided guidance, saying that JFACCs are usually the *supported* commanders for counterair operations, attacks on strategic centers of gravity when air operations form the bulk of the strike capability, and overall interdiction efforts by JFCs (as well as circumstances when ground commanders are the supported commanders for interdiction operations). But it should be noted that according to the CJCS concept paper and Joint Pub 0–2, "The *supported commander* has the authority to exercise general direction which includes the designation of targets or objectives, timing, and duration of the supporting force." In fact, an important area articulated in Joint Pub 1 and developed in Joint Pub 3–0 is the notion of flexible, simultaneous assignments of various components in a joint force as *supported* (recipient) and *supporting* (provider).

Joint Pub 3–0 makes a clear distinction between forces available and apportionment. First, JFCs must decide how much of the air and other capabilities should be made available to JFACCs for tasking. This is a JFC decision reached in consultation with component commanders. Every component has to achieve objectives assigned by a JFC and simultaneously provide capabilities for the entire joint force. This principle—recognized in the Omnibus Agreement for Marine air sorties (see Joint Pub 3–01.2 or Joint Pub 0–2)—has application for all joint components. The Omnibus Agreement requires the Marine air-ground task force (MAGTF) commander to provide long-range interdiction and reconnaissance, and air

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defense aircraft sorties to a JFACC (support for the whole joint force) plus any sorties that may be in excess of MAGTF direct support needs (that is, sorties to accomplish assigned MAGTF objectives). This is of course a two-way street. If a MAGTF or other component commander determines that organic air cannot achieve assigned objectives, a JFC directs a JFACC (through apportionment decisions) to provide the sorties required to accomplish the assigned objectives.

Once there is an availability decision, an apportionment decision is made to determine how the capability made available to a JFACC will be used to support joint operations. Such weight of effort decisions are also made by JFCs; JFACCs make the apportionment recommendations. Joint Pub 3–0 expanded guidance on the categories of apportionment. It explains that JFCs normally apportion by *priority* or *percentage* of effort into geographic areas, against mission-type orders, or against categories *significant for the campaign*. The publication then lists typical categories such as strategic attack, interdiction, counterair, maritime support, and close air support.

Someone—frequently a member of the Navy or a marine—will periodically ask what the final "C" in JFACC really signifies: commander or coordinator? Based on the joint definition of the term, a coordinator cannot task but only ask (and the response may be no). Accordingly, the Joint Staff sticks to the interpretation of JFACC which originated in the JCS deliberations of 1986, namely, as having the authority to task and being considered a commander. JFACC authority over service assets is normally limited to tactical control (TACON) or support relationships.

Interdiction

The Army and Air Force have been working on doctrine for interdiction since the term was first used to describe attacks to divert, disrupt, delay, or destroy enemy surface potential before it can oppose friendly forces. The Army has long felt that since ground commanders best understand how attacks on an enemy (especially those with a near-term effect) will affect planned ground operations, the ground commander should help determine interdiction targeting. NATO ground commanders came to the same conclusion and invented the category of battlefield air interdiction (BAI), which was incorporated into Army and Air Force doctrine. BAI was recently deleted from Air Force doctrine and it has never been recognized in joint doctrine. Other concepts for using interdiction also emerged over the years and include:

- attacks against the enemy logistic system
- attacks against key forces—that is, follow-on forces attack (FOFA)
- attacks against key operational capabilities (field command and control, NBC, et al.)
- synchronizing interdiction and maneuver
- joint precision interdiction (attacks focused on specific enemy forces to achieve a given effect—normally to gain a mobility differential—during a particular time frame with emphasis on attacks using real- and near-real-time intelligence).

Implementing these concepts has been fraught with controversy, partly due to differences in culture between air and ground commanders as well as to practical problems. For example, exactly where BAI started and ended was at issue. When was an aircraft performing close air support versus regular interdiction? Which related to who controlled what the aircraft did? Generally, the Air Force received multiple, independently prioritized target lists with very specific coordinates for movable targets. Air officers were disturbed to discover numerous cases where target coordinates had been based on intelligence older than that available to the air commander and where some targets had already been struck (although unknown to the Army staff or commander). Multiple, independently prioritized targets had to be merged into one prioritized list that ensured the highest priorities were struck first since the number of targets is always greater than the number of strikes available. The question of who should be responsible for merging lists can be contentious (the air or ground component or the JFC's staff?). In many situations, especially early in conflicts, the availability of surface-to-air missile (SAM) suppression assets or fighters to achieve local air superiority meant that only certain portions of the AOR could be sanitized at a particular time. This permits attacks on interdiction targets only in a particular area regardless of the target priority.

A new interdiction tool for JFCs was promulgated in the CJCS paper and Joint Pub 3–0. These documents acknowledged that

land and naval commanders are directly concerned with those enemy forces and capabilities that can affect their near-term operations [and] *accordingly, that part of interdiction with a near-term effect normally supports the maneuver to enable the land or naval commander to achieve the joint force commander's objectives.*

The document stipulates that JFCs may establish operational boundaries (lateral, rear, and forward) and within these boundaries

the land or naval operational force commander will be designated the supported commander and will be responsible for the synchronization of maneuver, fires, and interdiction through target priority, effects, and timing of interdiction operations.

The CJCS paper goes on to say:

In addition to normal target nomination procedures, the [JFC] *will establish procedures through which the land or naval force commander can specifically identify those interdiction targets they are unable to strike with organic assets within their boundaries which could affect planned or ongoing maneuver. These targets may be identified individually or by category, specified geographically, and/or tied to desired effects and time periods. The purpose of these procedures is to afford added visibility to, and allow the* [JFC] *to give priority to, targets directly affecting planned maneuver by land or naval forces.*

Details on this latest tool for interdiction and other issues concerning interdiction operations are being developed. The joint doctrine community is wrestling with this topic in Joint Pub 3–03, *Doctrine for Joint Interdiction Operations*, which is unlikely to be approved until sometime in early 1995. It will also be interesting to see if this publication addresses an interdiction problem noted by some during the Gulf War, namely, the need for timely and sufficient feedback from a JFACC to other component commanders on interdiction effects achieved by airpower.

Army Helicopters and Close Air Support

CJCS fundamentally altered the traditional view of close air support (CAS) by stating that Army helicopters perform CAS in his *Report on the Roles, Missions, and Functions of the Armed Forces of the United States* of 1993. It is now a primary function of the Army to "provide rotary-wing CAS for land operations" and, collaterally, "naval campaigns and amphibious operations." The joint doctrine community is currently developing a single set of joint CAS tactics, techniques, and procedures for all service fixed- and rotary-wing aircraft that will be promulgated in Joint Pub 3–09.3, *Joint Tactics, Techniques, and Procedures for CAS*. Changes to service doctrine needed for consistency should follow shortly after the joint publication is approved.

Search and Rescue, and Combat Search and Rescue

Current guidance requires a CINC to establish a Joint Rescue Coordination Center (JRCC) in order to plan, coordinate, and task components in support of combat search and rescue (CSAR) missions in operations. Joint Pub 3–50.2, *Doctrine for Joint Combat Search and Rescue*, changes the name and purpose of the organization: the Joint Search and Rescue Center (JSRC) would plan, coordinate, *and* control selected search and rescue (SAR) and CSAR operations using forces made available by a JFC. This change in mission requires a change in authority. In certain instances the officer in charge of JRCC is considered a JFC staff officer and in others a coordinator. Officers in charge of JSRC, however, will be regarded as commanders, specifically as functional component commanders. This responsibility will normally be delegated to component commanders who will be dual-hatted as JSRC commanders and who are likely to exercise only tactical control of available forces. This publication is in the approval process and could appear in late 1994.

U.S. Marine Corps

Combat Assessment

Joint Pub 2–0, *Joint Doctrine for Intelligence Support to Operations*, promulgated the new concept of combat assessment which includes but subordinates *battle damage assessment*. Combat assessment determines if target effects are accomplishing a JFC's campaign plan, and it is seen as the end of a cycle that begins with the commander's guidance from which targets are developed, weaponeered, and attacked. Combat assessment then analyzes an attack from two perspectives: its success and ability to create the effect that the campaign required. To make that determination, combat assessment is composed of battle damage assessment, munitions effects assessment, and a reattack recommendation.

Chain of Command

There have traditionally been two parallel chains of command, one going from the National Command Authorities (NCA) to the CINCs and the other running through service secretaries and chiefs to the field and fleet, with the former being regarded as the *operational* chain of command. The Legal Counsel to the Chairman recently advised that the language used to describe the chain of command in Joint Pub 0–2 should be adjusted to reflect the Goldwater-Nichols Act amendment to Title 10. Thus the current draft of Joint Pub 0–2 states there is only one chain of command: from the NCA to the CINCs. The authority of the service secretaries and chiefs is administrative control (ADCON) which is defined as a "channel of authority." This is intended to ensure that no one will mistakenly assume that a service secretary or chief has operational authority. Although the change is terminological—rather than a change in the underlying concept—there is likely to be resistance. For instance, some units do not fall within a CINC's chain of command (such as the Marine unit which provides helicopter support to the President and reports to the Commandant, and the similar organization found within the Air Force). Also, many of the authorities the service chiefs possess (such as ability to convene courts martial, issue permanent change of station orders, and promote) certainly give the appearance of some element of command. But until Joint Pub 0–2 is approved one should keep in mind that this new language is still subject to change. JFQ

Letters . . .

The Meaning of Jointness

To the Editor—Your readers owe Admiral William Owens a debt of gratitude for addressing the real meaning of jointness in "Living Jointness" (*JFQ*, Winter 93–94). Since the unifying theme of *JFQ* is jointness, it should be treated exhaustively and with precision. "Living Jointness" offered sound ideas and brilliant examples of jointness, yet the article could give the impression that there is a choice to be made between specialization and synergism. This is a false dichotomy, however, since synergy depends on selecting specifics.

The power of a synergistic organization of forces rests upon the discrete capabilities of the constituent forces and added strengths gained from combined or mutually reinforcing operations. This is true within components. Army combined arms doctrine does not simply blend infantry, armor, and other capabilities; it assigns suitable missions to specialized forces so that the total force is capable of accomplishing an assigned mission. The combined arms organization relies upon the competence of expert infantry, armor, and other forces. Both naval battle groups and Air Force composite wings similarly depend on the strengths of specific forces working in carefully crafted relationships. The capabilities of the joint force depend on integration (hopefully synergism), but of what? Service capabilities. This is not to say that specialization is everything. But basic combat capabilities reside in specific fighting forces. Specialization is necessary for military effectiveness; you must first have specialized capabilities in order to later achieve synergy.

More important, synergy does not result from "blending" or simply "combining" discrete military capabilities. The verb used here is particularly important. Synergy can be gained only by carefully and deliberately crafting a new composite. Discerning, testing, developing, and verifying combinations of specific weapons systems and assets which yield the greatest aggregate—the most synergistic forms of joint force—is the no-kidding challenge for military professionals interested in warfighting effectiveness. Military effectiveness depends on excellence in weaponry and training employment tactics, component operations, joint operations, and strategy.

"Blending" forces and "finding the right balance" between specialization and synergy are effects, not goals. The object of joint force design should be combat capability.

—Lt Col Charles M. Westenhoff, USAF
Directorate of Operational Issues
Headquarters, Department
of the Air Force

What's Best for the Team

To the Editor—As the commanding officer of the first west coast FA–18 squadron to integrate women, I carefully read "A Soldier Is a Soldier" by Rosemary Bryant Mariner (*JFQ*, Winter 93–94). Captain Mariner recommends that commanders tell personnel: "Anyone who has a problem with [integrating women into their units] can either get over it or get out." That style of leadership has not served the Navy well in the past, and today it fuels the defiance of those who are opposed to the integration of women. I would suggest that commanding officers instead assemble their personnel and tell them: "Our unit is integrating women because it's best for the team," then professionally challenge each of them to meet their individual responsibility to the integration effort.

—Commander Jeffrey S. Ashby, USN
Commanding Officer
Strike Fighter Squadron 94

JFQ welcomes your letters and comments. Write or FAX your correspondence to (202) 475–1012/DSN 335–1012. Internet: JFQ1@ndu.edu

The Liberation of Special Operations

To the Editor—The recent death of Colonel Charlie A. Beckwith, USA, brought back vivid memories for those who knew him or were acquainted with his career. There are images of Laos and Vietnam in the 1960s, of special operations in enemy-held territory, of brave deeds by soldiers who served outside the mainstream of the Army. Beckwith was a Special Forces officer when it was an unrewarding career path, long before Special Forces became a distinct branch. He lived through the trials of peers who found their ideas rejected by leaders who were bound by tradition. Careers were curtailed by special operations assignments: some were forced out, others felt lucky to get their majority before the magical twenty-year mark.

While more fortunate, Beckwith was nonetheless regarded as a maverick and something of a "loose cannon." I recall him defying convention in the mid-seventies at Fort Bragg—even after duty hours when he came to formal events in a camouflaged dinner jacket. His sometimes abrasive attributes surfaced in 1980 as he gained national attention after leading Delta Force on an aborted hostage rescue mission into Iran.

Eagle Claw (later known as Desert One), the ill-fated operation in Iran, served as a catalyst for special operations and joint operations. From this experience in southwest Asia we learned that when it came to planning, training, and equipment, special operations capabilities did not meet the need of the Nation for such missions. The operation also revealed significant failings in jointness. As Beckwith's obituary in *The Washington Post* noted, "Investigators concluded that the Army, Air Force, and Marine personnel had not trained together before being selected for the mission and that the operation lacked a clear chain of command." That investigation by the Special Operations Review Group, chaired by Admiral James Holloway, recommended that special operations as well as joint capabilities be strengthened. Other lessons from Grenada three years later also accelerated reform. Subsequent debates in Congress led to the Goldwater-Nichols Act and the Cohen-Nunn Amendment. The former law gave the Chairman and unified commanders new authority, while the latter created the U.S. Special Operations Command, a unified command with its own budget (for an examination of these events, see "Where Are Special Operations Forces?," *JFQ*, Autumn 93).

Colonel Beckwith's career was rooted in an era when joint and special operations were clearly not ascendant, when they suffered from service parochialism and also lacked command and budgetary support. His last operation marked the end of that era and the start of a new one. He lived to see special operations awarded a higher priority and gain greater acceptance within the Armed Forces.

—Paul C. Clark
Associate Professor of History
and Diplomacy
Armed Forces Staff College

Doctrine

JOINT PUBS UPDATE

The five following titles were recently approved under the scheme of the Joint Publication System:

▼ Joint Pub 1–02, *DOD Dictionary of Military and Associated Terms*, supplements the standard dictionary and is intended for use by the Secretary of Defense, defense agencies, military departments, and combatant commands (March 23, 1994; Joint Staff sponsor and lead agent: J-7).

▼ Joint Pub 2–01.2 (Secret), (U) *Joint Doctrine and Tactics, Techniques, and Procedures for Counterintelligence Support to Operations*, provides for counterintelligence (CI) in support of joint operations; lists both individuals and organizations (on the strategic through tactical levels) associated with CI infrastructure; and describes how CI assets can be integrated into deliberate and crisis planning processes, including CI collection, reporting, analysis, production, investigations, and operations in a joint environment (April 15, 1994; Joint Staff sponsor and lead agent: J-2).

▼ Joint Pub 3–01.5, *Doctrine for Joint Theater Missile Defense*, deals with countering nonnuclear tactical missile threats from conventional and chemical ballistic missiles, air-to-surface missiles, and cruise missiles to target within a theater of operations; emphasis is placed on ballistic missile and cruise missile threats, and defeating such threats through mutually supportive measures like passive defense (survivability), active defense, and attack operations (including fire support, offensive counterair, and interdiction missions); and covers sensors and processing systems, with specified C^4I to support the joint theater missile defense structure (March 30, 1994; Joint Staff sponsor: J-7, lead agent: Army).

▼ Joint Pub 3–07.3, *Joint Tactics, Techniques, and Procedures for Peacekeeping Operations*, complements Joint Pub 3–07, *Military Operations Other Than War,* with specific guidance on American participation in U.N. and non-U.N. sponsored peacekeeping operations, including approval process, command and control, coordination requirements, planning, training, and execution (April 29, 1994; Joint Staff sponsor: J-5, lead agent: Army).

Overview of Joint Publication System

Capstone Doctrine

Joint Pub 1

Joint Warfare of the U.S. Armed Forces

▼ joint action of the Armed Forces
▼ nature of American military power
▼ values in joint warfare
▼ fundamentals of joint warfare
▼ joint campaign

(November 1991)

Joint Pub 0–2

***Unified Action Armed Forces* (UNAAF)**

▼ doctrine and policy governing unified direction of forces
▼ chain of command and relationships between combatant commands and the military departments
▼ command relationships and other authorities
▼ doctrine and policy for establishing joint commands

(Under revision)

Keystone Doctrine

Joint Pub 1–0

Doctrine for Personnel and Administration Support to Joint Operations

▼ relationships, responsibilities, and procedures for the exercise of authority by combatant commanders in conducting personnel and adminsitrative support for joint operations
▼ service personnel and administrative systems and their collective effect on the capabilities of joint forces

(Scope currently being defined)

Joint Pub 2–0

Joint Doctrine for Intelligence Support to Operations

▼ nature of intelligence
▼ purposes of intelligence
▼ joint intelligence principles and joint intelligence responsibilities
▼ intelligence functions for joint operations
▼ joint intelligence architecture
▼ guidance concerning intelligence for multinational operations

(October 1993)

Joint Pub 3–0

Doctrine for Joint Operations

▼ strategic environment within which joint operations take place
▼ fundamental principles of joint operations
▼ planning guidelines for war and military operations other than war
▼ considerations for the conduct of joint operations during war
▼ principles for the military operations other than war
▼ considerations for multinational operations

(September 1993)

Joint Pub 4–0

Doctrine for Logistic Support of Joint Operations

▼ authorities and responsibilities for logistic operations
▼ logistic principles and considerations
▼ logistic planning
▼ guidance on logistics at theater level

(September 1992)

Joint Pub 5–0

Doctrine for Planning Joint Operations

▼ joint planning processes and concepts
▼ strategic direction and integration
▼ deliberate and crisis action planning

(Under development)

Joint Pub 6–0

Doctrine for C^4 Systems Support to Joint Operations

▼ nature and fundamental objectives of Command, Control, Communications, and Computer (C^4) systems
▼ C^4 systems principles
▼ C^4 systems doctrine for employment, configuration, plans, and resources
▼ C^4 systems employment responsibilities
▼ joint and combined C^4 systems standardization and procedures
▼ global C^4 infrastructure

(June 1992)

Source: Joint Doctrine Capstone and Keystone Primer (July 1994).

▼ Joint Pub 3–11, *Joint Doctrine for Nuclear, Biological, and Chemical (NBC) Defense*, provides for planning and executing nuclear, biological, and chemical defensive operations; focuses on NBC threats, national policy, and the strategic, operational, and logistic considerations peculiar to NBC defense (April 15, 1994; Joint Staff sponsor: J-5, lead agent: Army) JFQ

JOINT DOCTRINE WORKING PARTY

U.S. Central Command hosted the 13th Joint Doctrine Working Party (JDWP) on April 28, 1994 at MacDill AFB. Sponsored by the Director for Operational Plans and Interoperability (J-7), Joint Staff, semiannual working party meetings are designed to involve the combatant commands and services as well as the Joint Staff in the joint doctrine development process.

This meeting approved two publications. The first, "HUMINT [Human Intelligence] Support to Joint Operations," will integrate and coordinate component efforts for JTF commanders, and address linkages among the Defense HUMINT Service, other agencies, and the services. JDWP members voted unanimously to develop joint tactics, techniques, and procedures for HUMINT for inclusion in Joint Pub 2–02, *Joint Tactics, Techniques, and Procedures for Intelligence Support to Joint Task Force (JTF) Operations*, as a formal change to that publication for which J-2 serves as both Joint Staff sponsor and lead agent.

The second publication approved was "Joint Doctrine for Multinational Operations" which will expand on Joint Pub 3–0, *Doctrine for Joint Operations*, by consolidating guidance on both alliances and coalitions now scattered throughout joint doctrine. It will also capture lessons learned from recent operations and exercises. J-7 is Joint Staff sponsor and lead agent for this pub, and the National Defense University will write it as the primary review authority.

JDWP members also got a substantive briefing on the Universal Joint Task List (UJTL) and the Joint Training Master Plan (JTMP). As presented by J-7 this is a task-based joint training methodology that accommodates joint doctrine; the system derives capability requirements which are converted into plans and programs, and executed in exercises and other training. Evaluations and assessments generate feedback in various areas to include doctrine. This system will help to align capability requirements with plans and programs.

The next JDWP meeting is tentatively scheduled for October 1994 and will be hosted by the Joint Warfighting Center. JFQ

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LESSONS LEARNED

Examinations of success and failure are familiar preoccupations after every military action, but the availability of a formal system that documents *joint* lessons learned is less widely known. For that reason the following survey is provided as both a primer on joint lessons learned and an introduction to a regular TJW column on individual lessons from joint operations and exercises.

CJCS MOP 53, "Military Capabilities Reporting," requires unified combatant commands to submit After Action Reports (AARs) on joint operations as specified in Joint Pub 1–03.30, *Joint After Action Reporting System* (JAARS). Lessons are recorded in the Joint Universal Lessons Learned System (JULLS) format. Joint Pub 1–03.30 also identifies requirements for After Action Reports covering CJCS-directed, CINC-sponsored joint exercises.

Operational and exercise AARs submitted by CINCs can be found in the "Joint Center for Lessons Learned" (JCLL), a master database

maintained by the Evaluation and Analysis Division (J-7), Joint Staff. JCLL contains over 8,500 lessons learned gathered over the past seven years as well as AARs for both CJCS No Notice Interoperability Exercises (NIEXs) and independent CJCS Observation Reports on certain CINC-sponsored exercises and operations. Resident databases are kept by the combatant commands and services and updated twice a year.

The largest single JCLL entry (over 500 JULLs) is the CENTCOM AAR on Desert Storm. Recent AARs include Operation GTMO (ACOM/Haiti), JTF Somalia (CENTCOM/UNITAF), and Distant Runner (EUCOM/Rwanda); interim reports include Southern Watch (CENTCOM/Iraq), Provide Promise including Deny Flight, Able Sentry, and Sharp Guard (EUCOM/*ex*-Yugoslavia), and UNISOM II (CENTCOM/Somalia). There are also major CINC-sponsored reports on Bright Star '94 (CENTCOM/deployment; host nation), Fuertes Defensas '93 (SOUTHCOM/crisis action; SOF), and Tandem Thrust '93 (PACOM/crisis action; JFACC). The current CJCS reports include Eligible Receiver '94–1 (NIEX/PACOM), Bright Star '94 (CENTCOM/exercise evaluation), and Agile Provider '94 (ACOM/exercise evaluation).

The lessons learned range from the strategic to the tactical level of war, from the big picture to the seemingly trivial. In any joint force, however, certain issues invariably emerge to illustrate the different approaches of warfighting CINCs. They include crisis action planning, JOPES, and early augmentation of personnel in support of JTFs; designating, organizing, and manning JTFs; JFACC, targeting, and SOF integration/deconfliction; combined multinational operations and C^4I. For example, crisis action planning in standing up a JTF (especially if it is a component staff with no joint billets) presents problems which both PACOM and ACOM are alleviating through the use of deployable planning teams (PACOM Deployable JTF Augmentation Cell and ACOM DJTF–140) to provide joint expertise and personnel. EUCOM provides augmentees (from service component staffs) as cadre to assist crisis action planning and in initially standing up JTFs. These approaches have all proven to be effective in joint operations from Hurricane Iniki to Provide Promise.

Joint planners can access AARs through CINC or service staffs. By arrangement lessons in JULLS can be downloaded via WWMCCS and other means; it is also available on CD–ROM from the Navy Tactical Support Activity; telephone (202) 433–3678 / DSN 288–3678 for details. For information on JAARs and recent AARs, contact the Joint Staff at (703) 695–4604 / DSN 225–4604.

—Contributed by
CAPT Rosemary B. Mariner, USN
Exercise and Analysis Division (J-7)
Joint Staff **JFQ**

Documentation

ROLES AND MISSIONS

The Commission on Roles and Missions of the Armed Forces, which was established by the National Defense Authorization Act of 1994 (Public Law 103–160, November 30, 1993), held its first meeting in May. Under its charter the commission must report its findings and recommendations to the Committees on Armed Services of the Senate and House of Representatives within a year. The commission is intended to provide the Congress, Secretary of Defense, and Chairman of the Joint Chiefs of Staff with an independent review of current allocations of roles, missions, and functions among the services, and to make recommendations on changes in defining and distributing roles, missions, and functions. The specific duties of the commission are to:

▼ review the types of military operations that may be required in the post-Cold War era taking into account both the requirements for successfully conducting various types of operations and official DOD strategic planning (operations to be considered include defense of the United States; warfare against other national military forces; participation in peacekeeping, peace enforcement, and other nontraditional activities; action against nuclear, chemical, and biological weapons capabilities in hostile hands; support of law enforcement; and other operations as specified by the chairman of the commission)

▼ define broad mission areas and key support requirements for the military establishment as a whole

▼ develop a conceptual framework for the review of the organizational allocation among the Armed Forces of roles, missions, and functions which considers static efficiency (such as duplicative overhead and economies of scale); dynamic effectiveness (including the benefits of competition and the effect on innovation); interoperability, responsiveness, and other aspects of military effectiveness in the field and fleet; gaps in mission coverage and so-called "orphan" missions that are inadequately served by existing organizational entities; division of responsibility on the battlefield; exploitation of new technology and operational concepts; the degree of disruption that changes in roles and missions would entail; and the experience of other nations in this area

▼ recommend the functions for which each military department should organize, train, and equip forces; the missions of combatant commands; and the roles that Congress should assign to various DOD elements

▼ address the roles, missions, and functions of civilian portions of DOD and other national security agencies to the extent that changes in these areas are collateral to changes considered in military roles, missions, and functions

▼ recommend a process for continuing to adapt the roles, missions, and functions of the Armed Forces to future changes in technology and in the international security environment.

Members of the commission were appointed by the Secretary of Defense from the private sector based on their "diverse military, organizational, and management experiences and historical perspectives." The commission is chaired by John P. White, director of the Center for Business and Government, John F. Kennedy School of Government, Harvard University. The commission members include Les Aspin, lately Secretary of Defense and former

chairman of the House Armed Services Committee; Antonia H. Chayes, a lawyer affiliated with Endispute, Inc., who was Under Secretary of the Air Force during the Carter administration; Jan M. Lodal, director of the Aspen Strategy Group and president of the Intelus Corporation, who served on the NSC staff during the Nixon administration; Franklin D. Raines, vice chairman of Fannie Mae, an economist who was a coordinator for the Clinton transition and associate director of OMB during the Carter administration; GEN Robert W. RisCassi, USA (Ret.), former Commander in Chief of the U.N. Command and ROK-U.S. Combined Forces Command; and LtGen Bernard E. Trainor, USMC (Ret.), director of the National Security Program, John F. Kennedy School of Government, Harvard University, who was Deputy Chief of Staff for Plans, Policies and Operations, at Headquarters, Marine Corps. Also,

1994 CJCS ESSAY COMPETITION

The 13th Chairman of the Joint Chiefs of Staff (CJCS) Strategy Essay Competition was held on May 26, 1994 at the National Defense University. This competition challenges students from both intermediate and senior colleges to write on an aspect of international security, defense policy, or military affairs, with special emphasis on joint matters. The top honors this year were shared by two winning entries, while nine other essays were cited for their distinction.

Co-Winning Essays

Lieutenant Colonel Frank Stech, USAR (Army War College)
"Preparing for More CNN Wars"

Colonel Gerard A. St. Amand, USA (Army War College)
"Schizophrenic Sanctioning: A Failed U.S. Policy Toward China"

Distinguished Essays

Major Jay M. Parker, USA (Naval War College)
"Into the Wind, Against the Tide: Change and the Operational Commander"

Desiree A. Millikan, Department of State (Air War College)
"U. S. Foreign Policy in the Post-Cold War World: Options and Constraints"

Lieutenant Colonel Bradley L. Moffett, USAF (Army War College)
"Expanding Our Vision of Jointness: Pursuing Joint Force Development Strategies"

Commander Gerald Roncolato, USN (National War College)
"Military Theory and Peace Enforcement Operations"

Lieutenant Colonel Jan Van Pelt, USAF (National War College)
"Five Deficits and a Physics Problem: Restructuring the Military Services"

Robert D. Warrington, Central Intelligence Agency (National War College)
"International Conflict and U.S. National Security Policy into the 21st Century"

Robert D. Warrington, Central Intelligence Agency (National War College)
"The Helmets May be Blue, But the Blood's Still Red: The Dilemma of U.S. Participation in U.N. Peace Operations"

Douglas A. Hartwick, Department of State (National War College)
"America's Asia Policy: Preparing for the 21st Century"

Bruce C. Bade, Office of the Secretary of Defense (National War College)
"War Termination: Why Don't We Plan for It?"

three advisors have been named to the commission: ADM Leon A. Edney, USN (Ret.), former commander, U.S. Atlantic Fleet, and Vice Chief of Naval Operations; Jeffrey H. Smith, a partner in the law firm of Arnold and Porter who headed the Clinton defense transition team; and Gen Larry D. Welch, USAF (Ret.), president of the Institute for Defense Analysis, who was Chief of Staff of the Air Force and commander, Strategic Air Command. JFQ

PEACE OPERATIONS

Last year the President ordered an interagency review of peacekeeping activities in order to develop a comprehensive framework suited to the realities of the post-Cold War era. That review was completed in May 1994 and resulted in a Presidential Decision Directive (PDD) on reforming multinational peace operations. The PDD identifies critical factors to be evaluated in considering any military commitment to multinational peace operations. The directive requires that disciplined, coherent choices be made regarding which peace operations are supported and that specific criteria be addressed in endorsing a proposed peace operation. Moreover, if enforcement (chapter VII) operations are likely to involve combat, further criteria must be satisfied. A recommendation to the President on peace operations has to be based upon the cumulative weight of all criteria (see accompanying chart), with no single factor necessarily acting as sole determinant. JFQ

The National Defense University (NDU) will sponsor the following events in the coming months:

TOPICAL SYMPOSIUM
"Counterproliferation: Security Dimensions of WMD Proliferation"
will be held in Washington, D.C., on November 16 and 17, 1994

PACIFIC SYMPOSIUM
will be held in Honolulu, Hawaii, on February 22 and 23, 1995
with the cosponsorship of the U.S. Pacific Command

NATO SYMPOSIUM
will be held in Washington, D.C., on April 24 and 25, 1995
with the cosponsorship of the NATO Defense College

To obtain registration information—or to be placed on the mailing list for announcements of future symposia—please write or call:

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Presidential Guidance on Peace Operations

Factors for Supporting Peace Operations

- Multilateral involvement advances national interests
- International interest in dealing with the problem multilaterally
- Conflict represents threat to or breach of international peace or security
- Operation has clear objectives
- For traditional peacekeeping operation, a ceasefire is in place
- For peace enforcement operation, a significant threat to international peace and security is perceived
- Forces, financing, and appropriate mandate are available
- Inaction judged to have unacceptable political, humanitarian, and economic consequences
- Operation's duration is linked to clear objectives and realistic criteria

Factors for Participating in Peace Operations

- Participation advances U.S. national interests
- Risks to American personnel are considered to be acceptable
- Personnel, funds, and other resources are available
- U.S. participation deemed necessary for the operation's success
- Role of the Armed Forces is tied to clear objective
- Endpoint of the participation can be identified
- American public and Congress support the operation
- Command and control arrangements are acceptable

Factors for Participating When Operation Is Likely to Involve Combat

- Clear determination exits to commit sufficient forces to achieve clearly defined objectives
- Plan to achieve objectives decisively
- Commitment to reassess or adjust size, composition, and disposition of forces if necessary

Source: Compiled by William H. Lewis, Institute for Strategic Studies, National Defense University.

JFQuarterly Survey of Joint Literature

BOOKS

Donald M. Goldstein, Katherine V. Dillon, and J. Michael Wenger. *D-Day Normandy: The Story and Photographs*. Battle of Normandy Foundation official 50th anniversary volume. Washington: Brassey's (U.S.), 1994. 180 pp. $30.00. [ISBN 0–02–881057–0]

John A. Lynn, editor. *Feeding Mars: Logistics in Western Warfare from the Middle Ages to the Present*. History and warfare series. Boulder, Colo.: Westview Press, 1993. 326 pp. $44.50. [ISBN 0–8133–1716–9]

Dave R. Palmer. *1794: America, Its Army, and the Birth of the Nation*. Novato, Calif.: Presidio Press, 1994. 312 pp. $24.95. [ISBN 00–89141–523–8]

Michael P. Vriesenga, editor. *From the Line in the Sand: Accounts of USAF Company Grade Officers in Support of Desert Shield/Desert Storm*. Maxwell Air Force Base, Ala.: Air University Press, 1994. 271 pp.

James A. Winnefeld, Preston Niblack, and Dana J. Johnson. *A League of Airmen: U.S. Air Power in the Gulf War*. Project Air Force. Santa Monica, Calif.: RAND, 1994. 335 pp. $15.00. [ISBN 0–8330–1503–6]

MONOGRAPHS

David Jablonsky. *The Owl of Minerva Flies at Twilight: Doctrinal Change and Continuity and Revolution in Military Affairs*. Professional readings in military strategy, no. 10. Carlisle Barracks, Pa.: Strategic Studies Institute, U.S. Army War College, May 1994. 83 pp.

Michael J. Mazarr. *The Revolution in Military Affairs: A Framework for Defense Planning*. Carlisle Barracks, Pa.: Strategic Studies Institute, U.S. Army War College, June 1994. 45 pp.

John F. Schmitt. *Mastering Tactics: A Tactical Decision Game Workbook*. Quantico, Va.: Marine Corps Association, 1994. 107 pp. $14.95. [ISBN 0–940328–14–3]

Gordon R. Sullivan and James M. Dubik. *War in the Information Age*. Carlisle Barracks, Pa.: Strategic Studies Institute, U.S. Army War College, May 1994. 23 pp.

ARTICLES

John Arquilla, "The Strategic Implications of Information Dominance," *Strategic Review*, vol. 22, no. 3 (Summer 1994), pp. 24–30.

Brad M. Bergstrand, "What Do You Do When There's No Peace to Keep?," *Canadian Defence Quarterly*, vol. 23, no. 3 (Spring 1994), pp. 25–29.

Charles J. Dunlap, "Welcome to the Junta: The Erosion of Civilian Control of the U.S. Military," *Wake Forest Law Review*, vol. 29, no. 2 (Summer 1994), pp. 341–92.

Charles F. Hawkins, "Friendly Fire: Facts, Myths and Misperceptions," *U.S. Naval Institute Proceedings*, vol. 120, no. 6 (June 1994), pp. 54–59.

Darien L. Kearns, "The Need for Criteria in U.N. Peace Operations," *Military Review*, vol. 74, no. 7 (July 1994), pp. 34–42.

Jack W. Ellerton and Robert Kloecker, "The Challenge of Joint Forces Training in EUCOM," *Military Review*, vol. 74, no. 5 (May 1994), pp. 13–23.

James A. Lasswell, "Roles and Missions Myths," *Armed Forces Journal International* (May 1994), pp. 27–28.

Richard H.B. Lewis, "JFACC Problems Associated with Battlefield Preparation in Desert Storm," *Airpower Journal*, vol. 8, no. 1 (Spring 1994), pp. 4–21.

John M. Loh, "Adapting U.S. Military Organizations to the New Security Environment," *Strategic Review*, vol. 22, no. 2 (Spring 1994), pp. 7–14.

Edward N. Luttwak, "Washington's Biggest Scandal," *Commentary*, vol. 97, no. 5 (May 1994), pp. 29–33.

Andrew F. Mazzara, "Integrating the MAGTF into Joint Operations," *Marine Corps Gazette*, vol. 78, no. 7 (July 1994), pp. 65–68.

William Owens, "The Quest for Consensus," *U.S. Naval Institute Proceedings*, vol. 120, no. 5 (May 1994), pp. 68–72.

Terry Pierce, "Operational Maneuver from the Sea," *U.S. Naval Institute Proceedings*, vol. 120, no. 8 (August 1994), pp. 30–34.

Colin Powell, John Lehman, William Odom, Samuel Huntington, and Richard Kohn, "Exchange on Civil-Military Relations," *The National Interest*, no. 36 (Summer 1994), pp. 23–31.

John G. Ross, "InfoTech, InfoPower," *Armed Forces Journal International* (June 1994), pp. 31–36.

John M. Shalikashvili, "Two In-Boxes," *U.S. Naval Institute Proceedings*, vol. 120, no. 5 (May 1994), pp. 42–45.

Wayne G. Shear, Jr., "The Drug War: Applying the Lessons of Vietnam," *Naval War College Review*, vol. 47, no. 3 (Summer 1994), pp. 110–24.

Jeffrey E. Stambaugh, "JFACC: Key to Organizing Your Air Assets for Victory," *Parameters*, vol. 24, no. 2 (Summer 1994), pp. 98–110.

Bernard E. Trainor, "Amphibious Operations in the Gulf War," *Marine Corps Gazette*, vol. 78, no. 8 (August 1994), pp. 57–60.

Graham H. Turbiville, Jr., and Joseph G.D. Babb, "Operations Other Than War in the Asia-Pacific Theater," *Military Review*, vol. 74, no. 4 (April 1994), pp. 20–21.

Paul K. Van Riper, "The Use of Military History in the Professional Education of Officers," *Marine Corps Gazette*, vol. 78, no. 2 (February 1994), pp. 49–53.

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Joint Chiefs of Staff. Joint Pub 1–02. *Department of Defense Dictionary of Military and Associated Terms*. Washington: Government Printing Office, March 1994. 522 pp. $33.00 [ISBN 0–16–043183–2]

Naval Doctrine Command. Naval Doctrine Publication 1. *Naval Warfare*. Washington: Government Printing Office, March 1994. 74 pp.

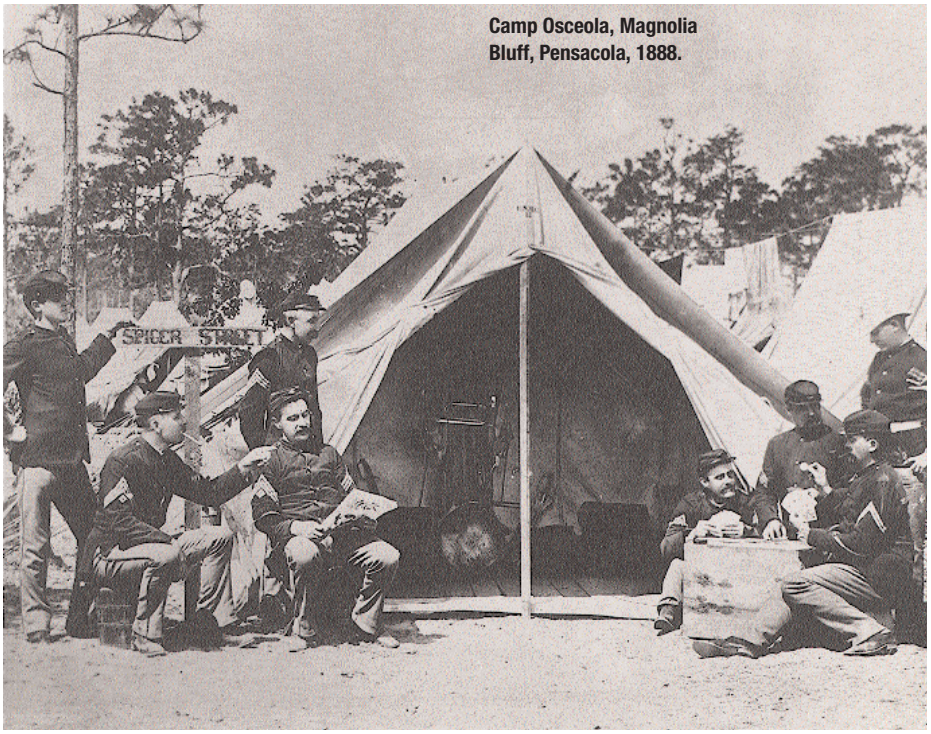
JFQ

***JFQ* lists recent selected titles on joint and combined operations, coalition warfare, military history, and related topics of interest to its readers. Publishers are asked to forward new works directly to the attention of the Editor at the address shown in the masthead.**

MARINES AS AN ENDANGERED SPECIES

A Book Review by
C.P. Neimeyer

The Marine Corps' Search for a Mission: 1880–1898
by Jack Shulimson
Modern war studies series.
Lawrence, Kansas: University Press of Kansas, 1993.
274 pp. $35.00.
[ISBN: 0–7006–0608–4]



Camp Osceola, Magnolia Bluff, Pensacola, 1888.

U.S. Marine Corps Museum

Marines are so commonly accepted as an "elite" that such classification has long been taken for granted by the public. However, Jack Shulimson's study uncovers a time when the Corps was not so highly regarded. The author is not a revisionist seeking to tear down a service reputation. Instead, he deftly progresses beyond mere revision to write a history about the Marine Corps in the late 19th century that will no doubt be a widely-referred-to institutional study for years to come.

Shulimson describes the rise of Marine professionalism and the Corps' transition into the 20th century as an integral part of the Armed Forces. He begins after the Civil War and traces the institutional development by analyzing the efforts of various commandants and officers to reform themselves and defend the existence of their service during a period of major change in America.

The Corps fell into disarray in the late 1870s and was unsure of its role in national defense. With an officer corps of only 75 and a reputation as an ill-defined organization, a group of Marine reformers among the younger officers demanded either a "funeral or a resuscitation" for their once proud organization. Fortunately, the Corps chose resuscitation, although some reforms were neither internally generated nor universally appreciated.

Starting with "The Old Corps, 1865–1880," Shulimson interprets the trials and tribulations of reformers such as Captains Henry Clay Cochrane and Robert Huntington and First Lieutenant Daniel Pratt Mannix. Being called a *young reformer* in that period was indeed a relative term. Henry Cochrane spent his first 18 years of service as a lieutenant.

Not only was promotion slow, but the Corps was saddled with numerous superannuated officers who were not concerned about reform nor future doctrine. Cochrane noted, for example, that some officers contented themselves "with keeping quiet" and "clandestinely prowling around the Capitol in citizens' clothes to avoid observation" while gathering certificates of character from naval officers for use in furthering their careers. A patronage system for promotion was endemic throughout the Corps and many saw Marine officers as dandies or ne'er-do-wells who had been unable to gain appointments to West Point or Annapolis. Cochrane observed that during the single year of 1880 one officer had been killed in a riding accident, another sent home "insane," and still another dismissed for cause. Philadelphia police arrested a Marine major for drunkenly accosting women in the streets while a Navy court-martial cashiered a colonel for "conduct unbecoming an officer."

Despite these internal problems, the greatest push for reform did not come from the likes of Henry Clay Cochrane, but from the Navy. Writing in the *U.S. Naval Institute Proceedings*, naval officers began to stress landing operations and speculated about the influence of such operations on both services. Contrary to what one might expect, surprisingly few Marines appeared concerned about advanced base operations. Shulimson notes that this deficiency of vision probably had more to do with a lack of a coherent Corps-wide unifying theme or doctrine than anything else.

The author gives much credit to the creation of the Naval War College and commissioning of large numbers of officers from among graduates of the Naval Academy for

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the establishment of a more professional Corps. The two institutions furnished Marine officers with a legitimacy that had been previously lacking in its officer corps. Moreover, the Naval War College provided the initial venue for gaming fleet operations and suggested various options for utilizing the Corps in future operations. Older Marine officers still preferred the status quo—detailing marines to man the secondary batteries on ships—but at least some advanced the reforms proposed by younger officers which were starting to be debated at the Naval War College and in the *Proceedings*. All these arguments may have continued for decades had the Nation not emerged as a global power following the Spanish-American War.

The war with Spain was a roles and functions watershed for the Corps. Expansion and acquisition of overseas assets had more impact on the Marines than any institution or reformer. The author notes that the United States found it easier to seize Spanish possessions than to decide what to do with them. As Cochrane noted in 1898, "the establishment of a colonial empire suggests foreign service duty for all grades of the Marine Corps." Now, instead of piecemealing marines as shipboard detachments, Colonel Commandant Charles Heywood proposed a 20,000-man force of "well drilled and equipped marines" able to sail at a moment's notice and respond to world trouble spots "without the necessity of calling on the Army." Corps relations with the Navy had come full circle because of improved Marine utility in the eyes of naval strategists. In essence the naval establishment had finally accorded the Corps its own professional jurisdiction: advanced base operations.

If there is one drawback to Shulimson's fine study it is his sole focus on the Marine officer corps. He almost totally neglects the enlisted ranks. For example, during the period covered the Marines experienced an extraordinarily high rate of desertion among its enlisted component. Yet in a single action in 1871 on the Korean peninsula, six of its members were awarded the Medal of Honor. There must have been other reasons for this discrepancy in behavior but Shulimson's work avoids that sort of question which is unfortunate because inclusion of primary source material from enlisted men frequently reveals differing views from those of officers.

This is a scholarly and thoroughly researched book that is a joy to read. In shedding light on a heretofore largely unknown portion of Marine Corps history, Shulimson clearly demonstrates just how formative this period was. It reveals interesting parallels between the late 19th century Corps-wide search for a service niche in the military establishment and the uncertainty that exists over that issue today in some circles. It should be required reading for all naval officers. **JFQ**

MEDITERRANEAN WARFARE IN 3D

A Book Review by
Brian R. Sullivan

The Lost Battle: Crete, 1941
by Callum MacDonald
New York: The Free Press, 1993.
350 pp. $24.95.
[ISBN 0–02–919625–6]

A ferocious battle raged around, over, and on Crete from May 10 to June 1, 1941. First the *Luftwaffe* relentlessly bombed the Greek island and British warships offshore for ten days; and then combined German airborne, airlanding, and seaborne forces engaged determined resistance by the Royal Navy, Commonwealth and Greek armies, and a large portion of the local population. When the brutal combat ended the *Wehrmacht* had captured the island and taken 12,000 prisoners. The Germans killed some 2,000 members of the Commonwealth forces, wounded another 2,000 men, sank nine Royal Navy ships and severely damaged six more (which took the lives of 2,000 British sailors in the process), and downed nearly fifty Royal Air Force (RAF) aircraft. Moreover, the invaders killed many Cretan civilians and Greek soldiers, then shot another 2,000 Cretans in the aftermath of the invasion. But the Germans also suffered heavily, losing 3,400 men dead and 3,300 wounded, and the destruction of nearly 200 Ju–52 transports.

The murderous nature of the fight can be gauged by comparing these appalling casualties with the limited size of the ground forces engaged. On the Allied side there were one Australian, one British, and two New Zealand brigades along with a reinforced battalion–sized unit of Royal Marines and eleven badly trained and poorly equipped Greek infantry battalions. They faced one paratroop and one mountain division of Germans. In fact, the Battle of Crete cost the *Wehrmacht* more losses than the entire Balkan Campaign. In *The Lost Battle*, Callum MacDonald recounts this gripping story in a superlative manner, creating what will surely become the definitive history of that bloody encounter.

Among the many virtues of the book is its multi–dimensional quality. It proceeds by stages from strategy to operations and tactics. Though the emphasis is on ground combat, the author also describes the air and naval aspects of the battle in fascinating detail. *The Lost Battle* begins with a short but authoritative account of the development of airborne warfare by the *Luftwaffe*, under the eye of General Kurt Student, then smoothly fits that story into the context of Hitler's strategy from the summer of 1940 to the spring of 1941. In turn, Hitler's plans for his European war leads to an examination of Churchill's strategy of defeating the Axis in the Mediterranean and his commitment of forces to defend Greece. A short

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Crete: Allied Dispositions on May 20, 1941

Source: D.M. Davin, *Crete. Official History of New Zealand in the Second World War, 1939–45* (London: Oxford University Press, 1953).

but exciting narrative of the disastrous British campaign in Greece carries the reader to Churchill's decision on the defense of Crete.

Churchill learned on April 27, 1941 through an Ultra decrypt of a *Luftwaffe* Enigma signal that the Germans intended to launch a simultaneous airborne and seaborne invasion of Crete. The next day he told General Archibald Wavell, his ground forces commander in the Mediterranean and Middle East, "It ought to be a fine opportunity for killing parachute troops. The island must be stubbornly defended." Despite the precise intelligence about German operational plans which came from Ultra sources in the following days, Churchill took no chances. He "suggested" to Wavell that command of forces on Crete be entrusted to Major General Bernard Freyberg of New Zealand.

Was there ever such a man? Freyberg's reckless valor and magnificent physique (he swam the English Channel at the age of 36) combined with genuine modesty to make him a legend before his thirtieth birthday. His early years hardly suggested such a destiny, for he honored his parents' wish to become a dentist. But his lust for risk and excitement drove him to abandon that stable career and to wander the earth in search of adventure. When World War I broke out he rushed to London and joined the British army. In 1915 he swam ashore from the invasion fleet off Gallipoli to light false landing beacons to deceive the Turks. In 1916 he won the Victoria Cross for his role in capturing the Beaucourt redoubt on the Western Front. Severely wounded, he was left for dead and only survived by a near miracle. Freyberg demanded return to combat on recovery despite suffering severe wounds. By the Armistice he had been wounded seriously eight more times and thrice awarded the Distinguished Service Order. At 27 he had risen to the rank of brigadier. With the Royal Marines, Black Watch, King's Royal Rifles, Argyll and Sutherland Highlanders, tough New Zealanders and Australians, and precise Ultra intelligence, could Freyberg fail to hold Crete?

But it did fall, and MacDonald's detailed explanation of how and why—despite all the advantages enjoyed by Commonwealth forces—provides the basic fascination of *The Lost Battle*. The lesson that emerges is not new but bears repeating: war is the most complicated of all human activities and success or failure can hinge on any one of a myriad of factors. Freyberg had many advantages and got almost everything right. His few mistakes, however, proved fatal.

To begin, Freyberg himself doubted that he could hold Crete and thus entered the fray with little confidence. RAF fighter cover that might have been available was largely lost over Greece or destroyed prior to evacuation. Of the few British fighters left to defend Crete most were lost in the first days of the air battle leading up to the invasion. The five surviving aircraft escaped to Egypt twenty-four hours beforehand which prevented the Royal Navy from safeguarding the island from amphibious attack. British ships could avoid *Luftwaffe* bombing only at night. Thus, Freyberg could rely only on ground forces to repel invaders but they would be subjected to constant German air strikes by day.

Worse, Freyberg failed to augment his ground forces. The Special Operations Executive, created by Churchill to "set Europe ablaze"

with insurgency, sabotage, and subversion, had sent a highly skilled agent named John Pendlebury to Crete in mid–1940. Despite Greek neutrality until Italy attacked in October, Pendlebury set about organizing a Cretan underground to resist an enemy invasion; but his efforts were hampered by lack of official support even after the evacuation of the Greek mainland. When the matter was finally brought to Freyberg's attention, he recoiled from the unconventional idea of arming civilians. Motivated by fierce patriotism the Cretans, even without British arms to make their guerrilla war more effective, resisted the Germans tenaciously.

Freyberg's final mistake was to deploy as much to check an amphibious assault as against an airborne landing. His son later claimed that Wavell had refused to give his father permission to move forces so as not to compromise Ultra. About ten days before the German landing, Enigma intercepts indicated that the bulk of the invasion force would arrive by air. According to the story, Wavell decided Ultra intelligence was worth more than Crete and that moving Freyberg's forces at the last minute could alert Germany that its operational code had been broken. But Freyberg's later actions suggest he really did fear a seaborne attack since he believed that the Royal Navy could not effectively oppose one. Thus, he placed forces along the beaches that otherwise might have held the vital airfield at Maleme.

Nonetheless, German paratroops jumped to disaster when they began landing on May 20. Ultra had given Freyberg precise advance warning of the drop and information to position many of his units and anti–aircraft guns. The local Cretan people enthusiastically joined in the slaughter of the descending Germans; and slaughter it was according to MacDonald. Commonwealth forces and Cretans killed most wounded or surrendering airborne troops who they encountered. The German parachutes lacked toggle lines and could not be maneuvered, so many Germans drifted helplessly into Commonwealth positions or villages where they were dispatched without mercy. Tortured by thirst in the ferocious heat of the Cretan day, often unarmed because their weapons containers were dropped separately, surviving paratroops fell back into defensive perimeters. There they watched successive waves of German transport planes come under accurate anti-aircraft fire, then explode in the air or crash in flames. Despite heavy *Luftwaffe* bombing and strafing, Freyberg's men gained the upper hand. By evening the Germans held only the edge of one airfield at Maleme, vital to Student's plan to reinforce his desperate paratroops with mountain troops flown in aboard Ju–52s.

But the outcome of the battle was decided on the night of May 20 by two New Zealand brigade commanders. Freyberg based his defense on immediate, vigorous counterattack to regain any airfield or portion thereof seized by German paratroops. In the dark the Germans lacked their single advantage of close air support and the Commonwealth forces had superior numbers in the Maleme sector. But Freyberg's brigadiers held fast to World War I attitudes that put husbanding reserves and holding a solid defensive line before the need to counterattack. If they had committed the reserves the airfield at Maleme would have been cleared of Germans. But the New Zealanders feared attack from the sea and would not strip coastal defenses to reinforce night attacks that came close to success. When dawn came the Germans still held part of the field and hill overlooking it.

Even so, shelling of the Maleme airstrip prevented a German airlanding until late afternoon. When Student's remaining reserve battalion was dropped instead to reinforce Maleme, half of the paratroopers drifted into New Zealand positions and were virtually annihilated. Dozens more fell into the Mediterranean and drowned. Perhaps as late as midafternoon of May 21, a concerted New Zealand assault might have overrun the field. But Stukas and Me–109s bombed and strafed the Commonwealth troops at will and their commanders decided not to attack under such pounding. By late in the day German air transports began flying in the 5th Mountain Division.

Freyberg hardly realized he had lost the battle. In fact, on the night of May 21, the Royal Navy took advantage of the darkness to evade the *Luftwaffe* and then scatter a German invasion convoy approaching Crete. Only the extraordinary heroism of Commander Francesco Mimbelli of the Italian torpedo boat *Lupo* saved the Germans from slaughter. Mimbelli engaged three British light cruisers at point–blank range, taking 18 six–inch hits but driving off the warships before they could sink all the transports and machine-gun helpless survivors in the water. Most Germans were eventually pulled from the Aegean but the amphibious assault had been smashed and a subsequent attempt was canceled. For Freyberg, the crisis appeared to have passed.

Meanwhile the Allied commander ordered a night attack on Maleme airfield that continued to the next morning. Yet still fearing an amphibious assault he did not commit all available reserves. The battle tipped back and forth though Commonwealth forces lacked sufficient strength to overcome the desperate German defense. Even as heavy fighting raged along the edge of the field, the Germans continued to fly in mountain troops. By late on May 22, Freyberg realized that over the previous twenty-four hours the course of events had swung decisively against him. The Germans had built up enough strength that they could not be dislodged from Maleme and could now fly in as many reinforcements as desired. Reluctantly, Freyberg ordered a retreat that he knew could only end in the evacuation of the island.

In the next three days enough German troops airlanded to begin a major offensive drive. They also proceeded to shoot hundreds of Cretan civilians in retaliation for resisting the invasion. On May 27, Freyberg

ordered an amphibious withdrawal starting the following night. Luckily for the Commonwealth forces the *Luftwaffe* had begun deployment from Greece to the Soviet frontier in preparation for Operation Barbarossa. Still, many ships and troops were lost to air attack as the Royal Navy carried out a four–night evacuation. The last troops embarked in the early morning hours of June 1. But thousands were abandoned who might have been saved. Ultra decrypts had not yet indicated that the *Luftwaffe* was flying out of its Greek bases and the Royal Navy believed that it could not afford to lose more warships off Crete. Some Commonwealth troops managed to escape Crete in small boats while others took to the hills to join the Cretan resistance. But most of the remaining defenders of Crete surrendered to the Germans during early June.

This battle offers many lessons. One is that control of the sea matters less than control of the air, although Churchill refused to accept that fact until he lost *Prince of Wales* and *Repulse* off Malaya six months after the battle for Crete should have made it clear. A more surprising lesson is that near-perfect intelligence did not result in victory for Commonwealth forces. Operational skill outweighed the advantages of knowing enemy plans and intentions. Churchill expected Freyberg to achieve a miracle. But the New Zealander, for all his personal virtues, was only a man and had subordinates and units distinctly inferior to their German opponents.

Nonetheless the outcome could have been far worse for the Allies. Combing the battlefield for documents after the battle, German intelligence found the first page of a British Ultra decrypt. The Germans had deduced that Freyberg knew in advance of the timing and place of their airdrops, but not how the information had come to him. Now they held the answer in their hands. Luckily for the Allied cause the Germans failed to analyze this evidence, instead deciding that an espionage ring in Greece had gotten the plans. For all the tragedies that befell Commonwealth forces on and off Crete, they were of little consequence compared with the terrible consequences that would have resulted from a German discovery of the Ultra secret in June 1941. JFQ

UNDER FOUR ENSIGNS

A Book Review by
W. Spencer Johnson

Men of War: Great Naval Captains of World War II
edited by Stephen Howarth.
New York: St. Martin's Press, 1993.
602 pp. $25.00
[ISBN 0–312–08844–2]

This impressive tome edited by Stephen Howarth belongs in the library of every student of modern warfare. The collection of essays portrays the roles played during the six years of World War II by 30 naval officers and one Marine. Drawn from the U.S. Navy and Marine Corps, the British Royal Navy, and the German and Japanese navies, the personae who sail across the pages reflect command on the broad strategic level, at fleet and task group level, and in individual ships. Also portrayed are several whose contributions were incalculable, although they occupied staff and support roles. In addition to the professional challenges faced by these exceptional naval leaders, readers are afforded fascinating insights into the personal traits of these leaders and the career paths that brought them to positions of command and responsibility during the war.

The authors of several essays in this collection knew their subjects personally and provide unique perspectives. Peter Kemp's portrait of Admiral of the Fleet Sir Dudley Pound as First Sea Lord is richer for having served under Pound in the Admiralty's Operational Intelligence Center. E.B. Potter not only served with Fleet Admiral Chester Nimitz at Pearl Harbor, but later collaborated with Nimitz in producing a history of sea power from ancient times to the modern era. David Rosenberg, who is currently at work on a biography of Admiral Arleigh Burke, has a long and close personal relationship with his subject. We are clearly beneficiaries of these associations.

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U.S. Navy

Fleet Admiral William F. Halsey

The book is divided into top brass, air admirals, amphibious admirals, submariners, anti-submariners, tactical and general, and a final category entitled "The Ones the Navies Ignore." It is in the last section that we meet Lieutenant General Holland M. Smith, USMC, a great Pacific War commander; Vice Admiral Ben Morul, USN, founder of the Seabees; Admiral John Godfrey, Royal Navy, an intelligence giant; and Captain Joseph Rockefort, USN, a code breaker who made the victory at Midway possible. The crucial contributions of Godfrey and Rockefort to the success of the war at sea during its dark early days were singularly unrecognized in the glow of bureaucratic politics which even the heroic atmosphere of the period could not submerge.

We learn of Sir Dudley Pound's steady hand at the helm of the Royal Navy in the Med, the Atlantic and Indian Oceans, and later in the Pacific. Providing operational intelligence and broad direction to forces at sea, he consistently left the command, control, and tactical direction of forces afloat to his commanders. One exception was his order to Convoy PQ17 to scatter when evidence of overpowering surface, subsurface, and air threats spelled doom for this convoy to north Russia. Battling the Axis at sea, the attentions of Churchill in London, and a brain tumor that took his life in 1943, Pound countered the threat to Britain's life lines around the world, thereby ensuring his nation's survival from the menace at sea and supporting Allied efforts in the bleak days of the war.

Pound's American counterpart, Fleet Admiral Ernest King, was an entirely different animal. King took a very direct hand in operations, guiding efforts in the Atlantic to counter the German U-boat offensive which took a dreadful toll on the East Coast in 1942. In the Pacific he was involved in planning strategy and fleet operations at every stage. He fully exercised his offices as Commander in Chief, U.S. Fleet; Chief of Naval Operations; and Commander of the Tenth Fleet, the latter position charged with the escort and routing of American convoys. The essay on King is by Robert Love of the History Department at the Naval Academy. Love treats his subject with due veneration but expounds his views as well, some mistaken, about strategy and decisions regarding the war. For instance, Love advances the idea that a landing should have been made in France in 1942. He states:

> *Churchill's preference for a grand strategy of dispersion and Roosevelt's vacillation thus condemned the Allies to wasteful, peripheral operations in the Mediterranean for two years. It unwittingly allowed the Soviets so to improve their position on the Eastern Front that they were ready to overrun Central Europe in 1944 when the Americans finally invaded France; and it gave the Germans at least twenty-four months to construct the formidable defenses of Normandy.*

Love reaches this conclusion despite the fact that shipping, especially assault shipping, was in extremely short supply in early 1942; that the strategic air campaign in Europe was barely underway so Allied forces could not even begin to contest air superiority anywhere in Europe; that U-boats ruled the Atlantic; that U.S. and British troops, newly raised and trained, were green and untested in combat; and that joint and combined organizations were yet to be refined. A landing on the coast of France in the fall of 1942 would probably have resulted in the forces being repulsed or a siege of any enclave seized that would have ended in an Allied reversal, at best a second Dunkirk. Equally disastrous results would have ensued in the Mediterranean and South Pacific, from which resources would have been diverted. The long debate over a return to the Continent in 1942 does need airing, with the advocates of opposing views making their cases once and for all. From this reviewer's perspective, the British were right: a cross-channel attack in 1942 was simply not on.

Howarth's portrait of Admiral Isoroku Yamamoto, a naval and grand strategist of the first order, is first-rate. A surface officer who became a convert to the emerging capabilities of naval aviation late in his career, he built up the Imperial Navy's carrier striking arm and successfully and boldly demonstrated it at Pearl Harbor and elsewhere in the Indian Ocean and South Pacific during 1941–42. He remained a battleship sailor, however, true to Mahan, as his strategy and tactics for Midway illustrate. He shared much in common with King and Halsey in his advocacy of pre-war naval aviation, yet was equally at home with battleship admirals and their belief in the decisive battle at sea. Unlike his American counterparts, Yamamoto had to navigate the tricky waters of Japanese interwar politics, truly a feat of daring for a senior officer opposed to Japan's rampant militarism and the prospect of war with America. Yamamoto was convinced that Japan could not win such a conflict if it went beyond six months or a year. Howarth cites Yamamoto as Japan's greatest naval leader since Togo.

Admirals Nimitz and Spruance emerge as the architects of the victory in the Pacific, while Germany's Raeder and Donetz are portrayed as the admirals who contested control of the Atlantic, only to lose perhaps as much for political reasons as ill-conceived or poorly executed operations at sea. An apolitical and highly professional Raeder is contrasted to the operationally and strategically gifted Donetz, an ardent National Socialist. The same contrast appears between two superb U-boat commanders. Lieutenant Commander Otto Kretschmer was a reserved, energetic officer who felt that the military should be apolitical and took exception to taking a personal oath to Adolph Hitler when he declared himself Fuhrer in 1934. Kretschmer was the first U-boat commander to sink over 250,000 GRT of shipping before being sunk himself in 1941 and spending the rest of the war in Canada as a POW. His compatriot, Lieutenant Commander Gunther Prian, was a hero who crept into Scapa Flow and sank Britain's *Royal Oak*, plus another 174,000 GRT, before he was lost and became the darling of Nazi propaganda for his exploits early in the war.

The book contains a wealth of knowledge on joint warfare. This is perhaps best illustrated in John Winton's essay on Admiral of the Fleet Viscount Andrew Cunningham who succeeded Pound as First Sea Lord. While commander in the Mediterranean, Cunningham had responsibility for supporting the British army in Greece and on Crete. In the hard fighting that ensued, the fleet lost two aircraft carriers to battle damage from air attacks, three battleships, four cruisers, and four destroyers. Two cruisers and six destroyers were sunk. All but overwhelmed by the Germans, General Wavell, army commander in the Middle East, told Cunningham that the army expected no more of his ships and that he was relieved of further responsibility. Cunningham told Wavell that he would go on; he would not let the army down. "There was a tradition that had to be upheld," he re-

sponded. "It took three years to build a ship. It would take three hundred to rebuild a tradition." Despite the loss of two more cruisers, a total of 16,500 British troops were evacuated from Crete, and the tradition of interservice support was upheld.

Under amphibious commanders, operations in North Africa, Sicily, Salerno, Anzio, and Normandy are highlighted, along with those conducted in the island-hopping amphibious warfare that was the Pacific. In the Atlantic, Army divisions, schooled in techniques learned at the Atlantic Amphibious Warfare School established by Major General Holland M. Smith, splashed ashore to seize beaches, like their Marine counterparts did in the Pacific. Admirals such as Richard Conolly and Kent Hewitt learned the art of amphibious warfare in the Atlantic and Mediterranean, as did their counterparts half a world away. Conolly, a naval commander at Sicily and Salerno, was later transferred to share his combat-honed skills in amphibious planning and operations with the Pacific Fleet. His fighting spirit for close range naval gunfire support earned him the nickname "close-in Conolly" and the undying respect of marines and soldiers he supported so well. His spirit of joint cooperation was no less remarkable, as described by one British visitor to his pre-Sicilian invasion headquarters.

The attitude there was not one of educating the Army to an understanding of naval limitations . . . it was rather a complete and generous appreciation that the Army had the sticky end of the job, and that somehow or other the Navy would find ways of seeing them through, and of implementing any landing plan dictated by the tactical needs of the military task.

This is the essence of jointness—the spirit of dedication to joint warfighting goals as evidenced by Cunningham and Conolly—that is at the heart of any joint or combined operation and organization.

This impressive collection is not without its flaws. With almost thirty authors, the essays vary in length and style. Many are documented, some are not—this reviewer wishes they all were. The book would have benefitted from proofreading by a naval hand to catch those little annoyances such as describing an LST as a ship which lands troops instead of tanks. With authors of various nationalities treating a number of navies, notes on differences in organizational structure would be useful to the reader. For instance, an Imperial Japanese Navy destroyer division was comprised of a cruiser and 15 destroyers—a large squadron or flotilla by Western standards. But these few flaws are minor in a work of immense value and pass easily in the reader's wake.

Finally, while awed by the personages presented one wishes some other officers had been included in this work. Missing is Fleet Admiral William Leahy, Roosevelt's chief of staff and, de facto, first Chairman of the Joint Chiefs of Staff. Admiral Hart of the Asiatic Fleet is also missing. Admiral Sir Percy Noble, who commanded Royal Navy forces engaged in the battle of the Atlantic during 1940–41, is not portrayed, nor is his successor, Max Horton, who would witness the victory over the U-boats. No Italian naval officers are included despite their operations in the Mediterranean and pioneering underwater swimming attacks against the Royal Navy in Alexandria—feats emulated by the British and American navies later in the war and the precursor to SEAL operations. Again, this reviewer could only wish for an even longer book. It is also interesting to note that many, indeed most of the officers depicted achieved their greatness long after today's mandatory retirement age. Some in fact came out of retirement, a lesson worth pondering.

Men of War is a book to be savored and treasured. Lessons in joint and combined warfare, fighting spirit and operational flexibility, and leadership are all there between the covers of this volume. It should be part of every thinking soldier's, sailor's, marine's, and airman's seabag or barracks bag if not his or her knapsack. **JFQ**

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